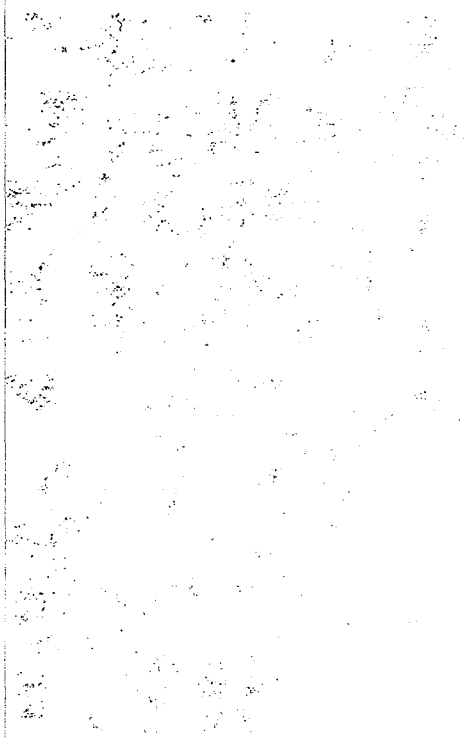
HR Library # 11310

ALDE
ESEAR
ORAT

MODEL TEST
UNIFO

DISTORTE

CONSOLIDATED ED



MODEL TESTS OF BOWLINE DIFFUSERS

UNIFORM SCALE STUDIES

and

DISTORTED SCALE CALIBRATION

for

CONSOLIDATED EDISON COMPANY OF NEW YORK

by

George E. Hecker
Gordon T. Gurney

Professor Lawrence C. Neale, Director

ALDEN RESEARCH LABORATORIES
WORCESTER POLYTECHNIC INSTITUTE
HOLDEN, MASSACHUSETTS, 01520

July, 1971

ABSTRACT

The proposed diffuser, designed to discharge heated condenser cooling water from the Bowline plant, was tested in a basin at a uniform model scale ratio of 1/45. These tests determined the temperature rises and general hydrothermal patterns within a few hundred feet from the diffuser. Steady state tests were conducted for a river velocity of 1.0 ft/sec whereas time dependent tests were conducted at lower river velocities. These tests indicated the plant temperature rise of 15F used in the investigation was reduced to temperature rises of no more than 6 to 7F in the region where the buoyant discharge jets reach the surface. Significantly lower temperature rises were produced at increasing distance from the diffuser.

Various diffuser designs were subsequently tested in the 1/80 vertical and 1/400 horizontal scale Indian Point III model to match the hydrothermal patterns observed in the undistorted scale model. This calibration of the distorted scale diffuser was conducted using the steady state conditions tested in the undistorted model. Evaluation and adjustment of the overall plume trajectory, vertical temperature distribution and maximum surface temperatures led to a diffuser geometry which simulated the undistorted scale data.

INTRODUCTION

Description of Bowline Cooling Water System

The Bowline plant will consist of two fossil-fueled units each with a nominal capacity of 600 MW. These units are being constructed on the west bank of the Hudson River near the town of Haverstraw, New York.

Cooling water will be withdrawn from the Hudson River through an intake structure on Bowline Point Pond, the latter connected to the river by an inlet channel as shown on Figure 1. At maximum anticipated load, the plant will withdraw 1,710 cfs for condenser cooling and produce a temperature rise of approximately 13.5F at the point of discharge. To include the effects of possible recirculation, these model tests were conducted with a flow of 855 cfs per unit and a plant temperature rise of 15F.

The discharge structures will be a submerged multi-jet diffuser for each unit as shown on Figure 2 with the line of ports essentially parallel to the river axis. Each diffuser will consist of an "L" shaped configuration of 10.5-foot diameter pipe with eight discharge nozzles. The pipe connecting the diffuser with the plant is to be buried in the river bottom. Each nozzle will be 3.0 feet in diameter at the point of discharge, have a centerline submergence of 15 feet at mean water level, and be inclined upward 5° from the horizontal to minimize bottom scour. The distance from the nozzle centerlines to the river bottom will be approximately 6 feet and the minimum spacing between nozzles 25 feet. At a flow of 855 cfs per unit, the initial discharge velocity will be 15 ft/sec.

Thermal Discharge Criteria

New York State has adopted regulations which limit temperature rises produced by artificial sources of heat. For estuaries, the maximum surface temperature at any point

shall not exceed 90F. In addition, at least 50 per cent of the cross sectional area and/or flow, including at least 1/3 of the surface width, shall not be raised more than 4F or to a maximum of 83F.

These criteria indicate the plant cooling water must be diluted rapidly with ambient river water so as to comply with the maximum temperature criteria near the outfall structure. This initial jet dilution in addition to dispersion in the river, must also produce acceptable overall river temperatures. The discharge diffuser described above was designed to meet these thermal criteria.

Purpose of Model Studies

The basic purpose of the model studies was to verify that the diffuser design previously described will meet the adopted criteria for thermal discharges.

This report describes model testing of the diffuser at a uniform 1/45 scale and the simulation of the resulting near field hydrothermal pattern in the distorted scale Indian Point III model.

A future report will describe tests using the distorted scale model to obtain the overall temperature rise pattern in the Hudson River in conjunction with additional sources of heat from plants upstream from the Bowline plant.

Previous to these studies, tests had been conducted with an earlier diffuser location and design. The previous diffuser was to be located a few hundred feet south of the present position in essentially the same water depth and was to have the 10.5-foot diameter pipes connecting the diffuser with the plant set on the river bottom. In addition, the discharge ports did not have the contracting nozzles of the present design. The previous model studies at a uniform scale were conducted to simulate only one unit.

BASIC CHARACTERISTICS OF DIFFUSERS

The intent of a diffuser type discharge is to combine the rapid entrainment of ambient water by submerged jets with an initial spacial distribution of the effluent, so as to achieve maximum mixing with the ambient water.

Considerable work has been done by various investigators on the dilution of single buoyant jets discharged horizontally below the free surface. These studies were for an infinite ambient fluid at rest with no bottom boundary effects. Minimum dilutions or maximum concentrations were shown to be dependent on the relative submergence and on the initial densimetric Froude number of the discharge. The greater the submergence and the higher the densimetric Froude number, the greater will be the dilution.

Almost no basic work has been conducted on multiple jet discharges, and the work that has been conducted is restricted to specific project applications. The Alden Research Laboratories has initiated basic research into diffuser characteristics, especially tests on the interference between jets of a diffuser with no ambient currents. These tests, together with those studies for specific projects at ARL have yielded the following qualitative information to this date:

1. Significant reductions in dilution will occur if the jets are not sufficiently separated. The desired separation of individual jets is dependent on submergence and densimetric Froude number.
2. For discharges into a moving ambient fluid considerable reductions in dilution can occur depending on diffuser orientation. For a line source parallel with the current, greater dilutions occur at low or no current.
3. Artificial model boundaries to the ambient fluid, such as walls and floors, will affect recorded dilution ratios depending on ambient currents, discharge momentum,

relative spatial arrangement of the diffuser to the boundaries and test procedures. These characteristics will be referred to in evaluating the performance of the Bowline diffuser as tested in the undistorted model.

DESCRIPTION OF MODELS AND TEST PROCEDURE

Two models were used in this phase of the test program for the Bowline diffuser: a 1/45 scale undistorted model and the 1/80 vertical and 1/400 horizontal scale Indian Point III model.

1/45 Scale Undistorted Model

The diffuser for both units previously described and shown in detail on BECHTEL Drawing Nos. A-229, C-45 and C-53 Revision 3, were modeled to a 1/45 scale ratio. Photo 1 shows the model diffuser.

Figure 3 indicates the model boundaries and arrangement of the diffuser in the model test basin. Photo 2 shows an overall view of the basin.

Ambient water simulating the Hudson River entered the model from a single supply line, passed through a flow distributor to obtain a uniform velocity pattern across the entire basin, and was discharged at the downstream end of the basin over a long sharp crested weir. River currents, measured by timing dye streaks in the water, were always in the upriver direction due to the fixed arrangement of the model basin. Plant cooling water from each of the two units was measured by an orifice meter installed in the diffuser supply line.

Two types of tests were conducted using the undistorted scale model:

a) steady state tests at the higher river currents and

b) time dependent tests particularly for the lower range of river currents.

The first type of testing was reliable only at the higher current for which no heat build-up occurred in the model basin. For these tests, the thermocouples on the movable beam shown on Figure 3 were set at submergences of either 1 foot, 8 feet or 15 feet, and the

entire basin traversed by repositioning the beam at 50 to 100-foot intervals. Ambient temperatures were measured upstream from the flow distributor. In this manner, the entire three-dimensional hydrothermal pattern was measured.

The second type of testing was initiated to determine the maximum surface temperature for the lower river currents which did not allow steady state testing in the model basin. Since this involved a different measuring procedure and thermocouple arrangement, such testing was also conducted over the entire range of currents to check the data on maximum temperatures obtained with the steady state tests. For the time dependent tests, the clusters of thermocouples shown in Figure 3 were set at the point where the buoyant jets reached the surface, as determined from dye observations. Another cluster having thermocouples of varying submergences, was set upstream and shoreward from the diffuser to measure the temperature of the ambient water entrained by the diffuser. The ambient current was established and the total plant flow and temperature rise set using a by-pass to prevent plant flow from prematurely reaching the diffuser. When all conditions were satisfactory, the by-pass was closed, dye was injected into the plant flow and subsequently discharged from the diffuser. Observation of the dye pattern in the model basin indicated when diffuser effluent was being re-entrained in the discharge jets. Temperatures from the clusters of thermocouples were scanned in sequence by a data logger and printed on paper tape by a high speed printer.

1/80 Vertical and 1/400 Horizontal Scale Model

Figure 4 illustrates the area of the Hudson River included in the model and gives the basic tide controls for model operation. During normal testing with periodic ebb and flood currents, flow enters and leaves the model alternately at the upstream and downstream

boundaries. All water discharges from the model flows into a sump from which it is pumped back into the model at the appropriate boundary. Flow rates are controlled by calibrated weirs and slide gates, whose periodic movement is governed by motor driven cams.

Cooling water flows at each plant site are pumped from the appropriate intake structures through electric resistance heaters to provide the temperature rise produced by the plant condensers, and discharged from the corresponding outfall structures. These flows are measured by calibrated orifice meters.

Temperatures are normally measured by numerous thermocouples positioned throughout the model and recorded on magnetic or paper tape using a data logger. For these special calibration tests, however, thermocouple "clusters", such as shown on Figure 3 were used to obtain the near-field temperature patterns provided by the various Bowline diffusers tested. The horizontal spacing of the thermocouples was 100 feet prototpye for this model scale.

Evaluation of the various diffuser geometries tested in the distorted model was based on a) the overall plume trajectory, so as to simulate momentum interaction and spread of the effluent in the river; b) vertical temperature distribution, to initiate the proper extent of the plume in depth; and c) maximum surface temperatures, to initiate the proper surface temperature pattern. Since such data was only available from the undistorted scale model for the steady-state tests at the higher current, calibration using the distorted model was also conducted with the same steady upstream current by fixing the tide control gates at the appropriate positions.

TEST RESULTS AND EVALUATION

The following sections present test data from the undistorted scale steady-state and time dependent tests as well as from the steady-state calibration tests using the distorted scale model.

1/45 Scale Undistorted Model

Steady state testing gave reliable data only at a current of 1.0 ft/sec. No heat build-up in the model basin occurred and the plume edge did not meet the riverward basin wall until 400 to 500 feet downstream from the diffuser center. Photo 3 shows the discharge plume at 1.0 ft/sec current. The corresponding temperature rise data at depths of 1 foot, 8 feet and 15 feet below the surface are shown in Figures 5, 6 and 7 respectively. The maximum local surface temperature rise for this test condition was 5.6F. It seems evident that the near field temperatures were not affected by the basin walls.

The plume centerline intersected the downstream model weir approximately 250 feet riverward of the diffuser. Figure 8 shows this plume centerline for two units as compared to the centerlines at various other currents determined from the previous tests with only one diffuser of the original design for one unit.

Steady-state tests at lower currents did not yield reliable data due to the artificial boundary conditions of the basin walls and the consequent heat build-up in the basin. For the lower currents surface temperatures at fixed locations were measured versus time and the maximum surface temperature rise above ambient determined for the period prior to heat build-up. The time period available prior to heat build-up at the various currents was determined by a combination of dye observations and noting when the recorded ambient temperatures shoreward of the diffuser started to increase. Tests were conducted for both

one and two units operating. Figure 9, representative of the test results, indicates the maximum temperature rise irrespective of location at currents of 1.0 ft/sec and 0.25 ft/sec. The time at which the maximum temperature rise was selected is indicated, and it should be noted that peak temperatures rather than average maximums were plotted.

A summary of the maximum temperature data at various currents for one and two unit operation is shown on Figure 10. At low or zero current the ambient diluting water flowed into the discharge from the shoreward side of the diffuser, minimizing jet interference and the difference in performance between one and two unit operation. However, tests with no currents and two units were not reliable due to very rapid heat buildup. At intermediate currents jet interference occurred with consequent higher temperatures. Some reduction in maximum temperature was indicated at even higher currents, probably due to greater inflows of ambient water. Good agreement was shown between the time dependent and steady-state tests at 1.0 ft/sec. Considerable scatter was evident at intermediate currents, and it is not clear whether one-unit operation produced lower temperature rises at such currents.

Evaluation of the test data at low and particularly no current, suggests that the time dependent testing technique yields temperature rises somewhat higher than would be obtained by steady-state tests. This is due to the selection of absolute maximum temperatures, and the lack of time prior to heat buildup at low and no natural currents, during which the diffuser discharge can induce a flow pattern and the resulting dissipation of heat. Data from a basic diffuser research facility at ARL, set up to simulate a two-dimensional section of the Bowline diffuser with no ambient current indicates a steady state dilution of approximately 7, or a maximum temperature rise of approximately 2F at no natural current.

It should be noted, however, that the test procedure and the data of Figure 10 do not

include the effects of warmer water returning to the diffuser during tidal flow reversal, nor the transient nature of the interacting natural and induced flow pattern. Such information will be obtained at a future date using the distorted scale tidal model with the Bowline diffuser adjusted to match the above steady-state test data.

1/80 Vertical and 1/400 Horizontal Scale Model

Various diffuser geometries were tested in the Indian Point III distorted scale model to simulate the near-field hydrothermal pattern obtained from the 1/45 scale model. These calibration tests were done with a constant upriver or flood current of 1.0 ft/sec at the Bowline diffuser.

Two basic diffuser geometries were tested; one with two ports per unit and one with four ports per unit. The ports were vertical slots 27/32 inches high and the port spacing was not uniform due to restrictions imposed by model construction. Three slot widths were tested to vary the outfall velocity and thereby the plume trajectory and temperature pattern. Tests with both one and two units operating were conducted, however, the selection of the optimum design was based on hydrothermal conditions with two units.

Initial tests were conducted with two 1/4" wide ports per unit, or a total of four 1/4" wide ports for both units. This geometry was rejected since it produced maximum temperature rises somewhat lower than indicated by the undistorted scale model.

Data from tests with eight 1/8" wide ports for both units indicated good agreement as to maximum temperatures, however the plume trajectory extended farther offshore into the river than was indicated by the undistorted scale model. Since relatively excessive plume momentum would produce misleading temperature patterns, particularly during tide reversals, this geometry was also rejected.

To reduce the plume momentum, tests were conducted with eight 1/4" wide ports for both units. This geometry resulted in excessive temperature rises due to lower discharge velocities and mixing, and was therefore rejected. Also, the plume was deflected somewhat more by the river current than was indicated by the undistorted model.

It was therefore necessary to compromise between the greater maximum temperatures and excessive plume deflection of the eight 1/4" wide ports, in comparison to the acceptable maximum temperatures but excessive riverward plume trajectory of the eight 1/8" wide ports. This compromise was affected by a design of eight 3/16" wide ports for both units, which produced maximum temperatures between the other two designs and a plume trajectory which compared well with that obtained using the undistorted model. Photo 4 shows the plume at 1.0 ft/sec in the Indian Point III distorted scale model, and may be compared to Photo 3 of the 1/45 scale undistorted scale model.

Figure 11 shows the test results in the distorted model with one unit operating. Figures 12 through 15 illustrate the temperature pattern produced by the selected geometry with both units at depths of 1.0, 5.0, 10.0 and 15.0 feet. This test produced a maximum surface temperature rise of 5.3F, and indicated extensive vertical mixing. This data compares very well to the undistorted model data shown in Figures 5 - 7. The results of an additional test of the distorted model with two units, shown in Figures 16 through 19, indicated a maximum surface temperature of 7.2F, or approximately 1.6F, higher than that of the undistorted model. Since perfect agreement between the two models as to maximum local surface temperatures, vertical mixing and plume trajectory was not possible, this design was evaluated as producing a reasonable match with the undistorted model, and was selected for subsequent testing in the Indian Point III model.

CONCLUSIONS

Data from the 1/45 scale undistorted model defined the three-dimensional hydrothermal pattern produced in the vicinity of the Bowline diffuser at a river current of 1.0 ft/sec. Together with additional time dependent tests at other currents these data indicated that the maximum recorded surface temperature rise was 6.7F. The average maximum temperature rise was 6.0F.

A diffuser geometry was selected for testing in the distorted scale Indian Point III model. This selection was based on matching the complete hydrothermal pattern measured using the 1/45 scale model. Data indicated a reasonable simulation was achieved.

The effect of the Bowline diffuser on overall temperature rises in the river as measured in the Indian Point III model will be given in a future report.

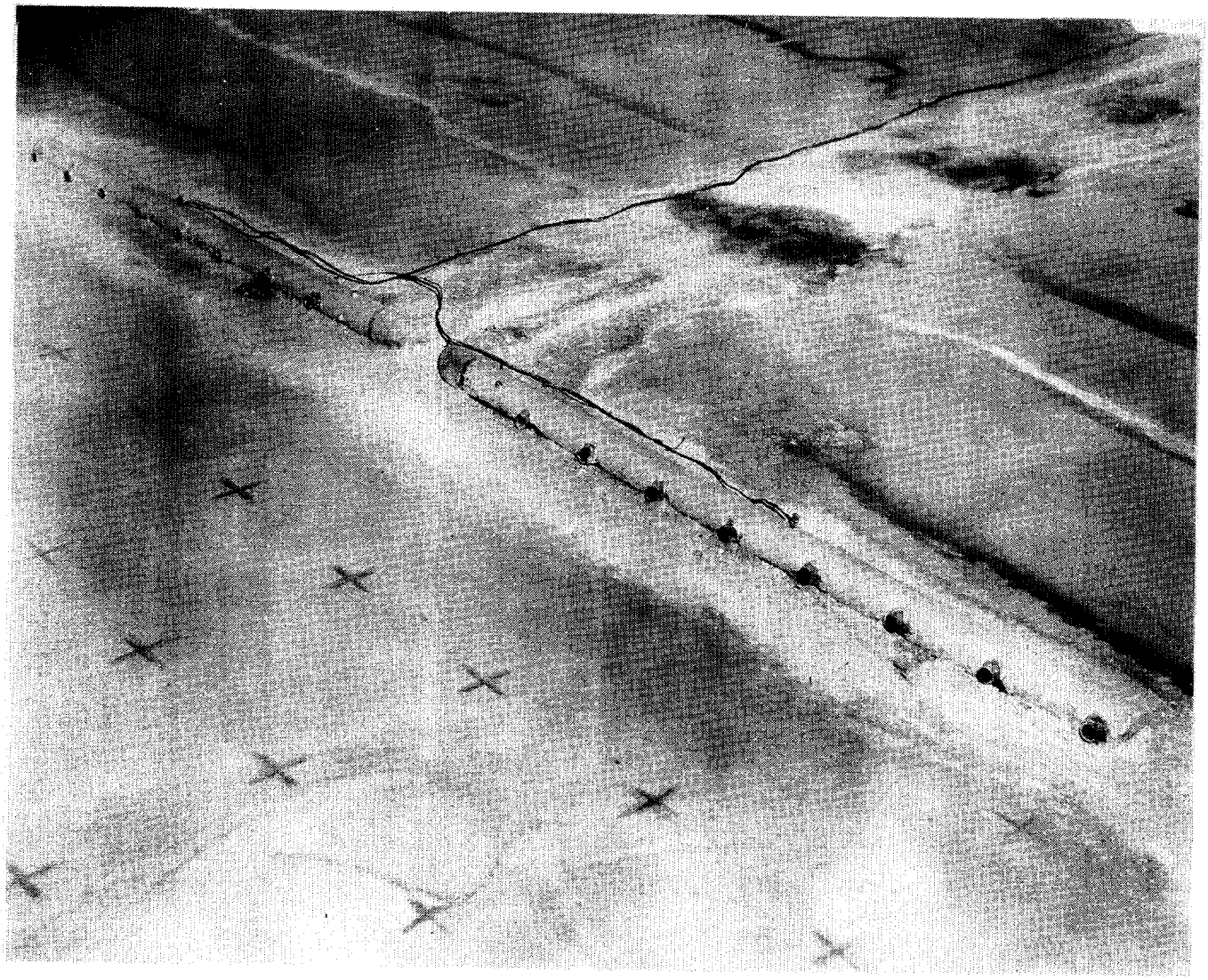


Photo No. 1 - 1/45 Scale Bowline Diffusers

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

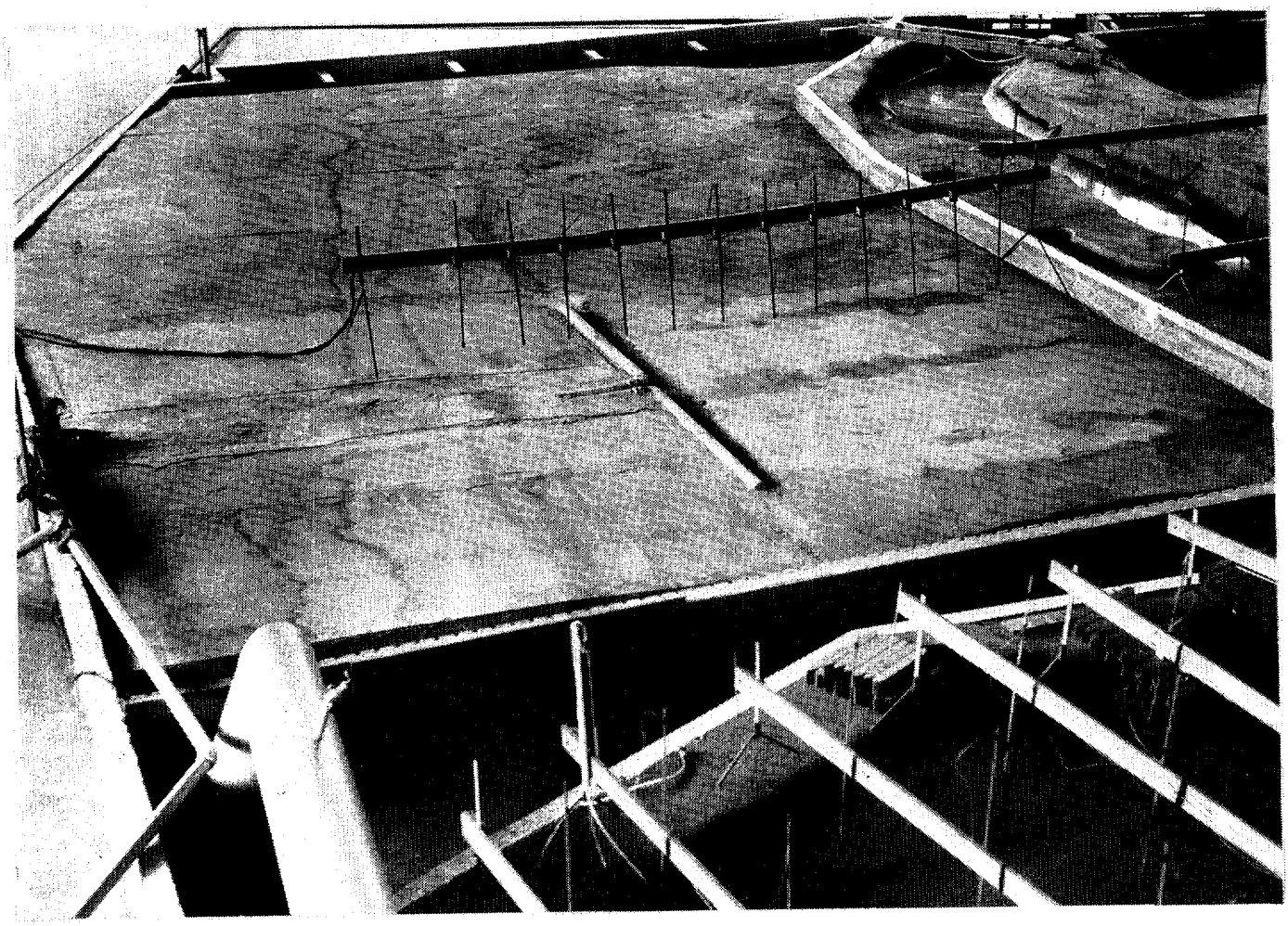


Photo No. 2 - Overall View of 1/45 Basin

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

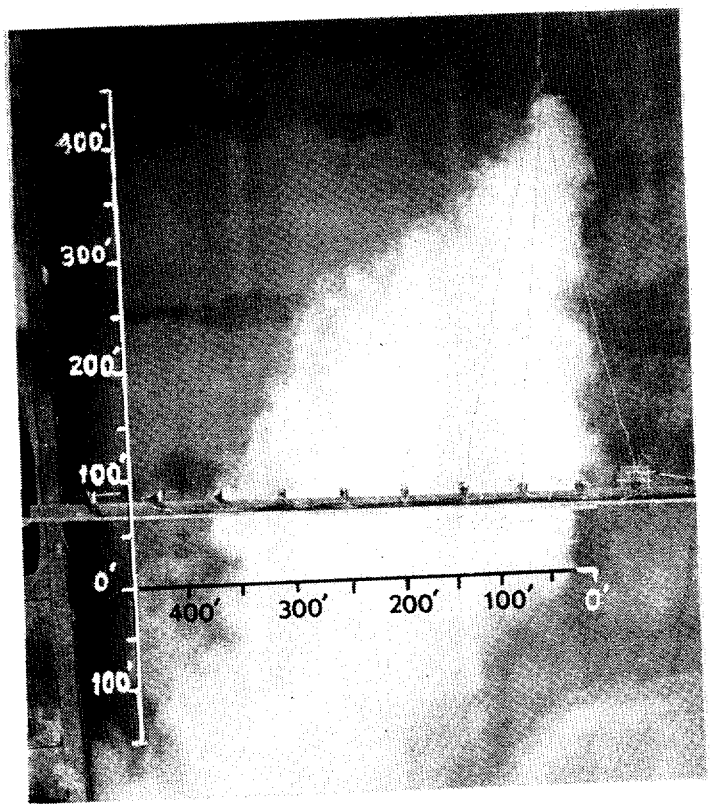


Photo No. 3 - 1/45 Model

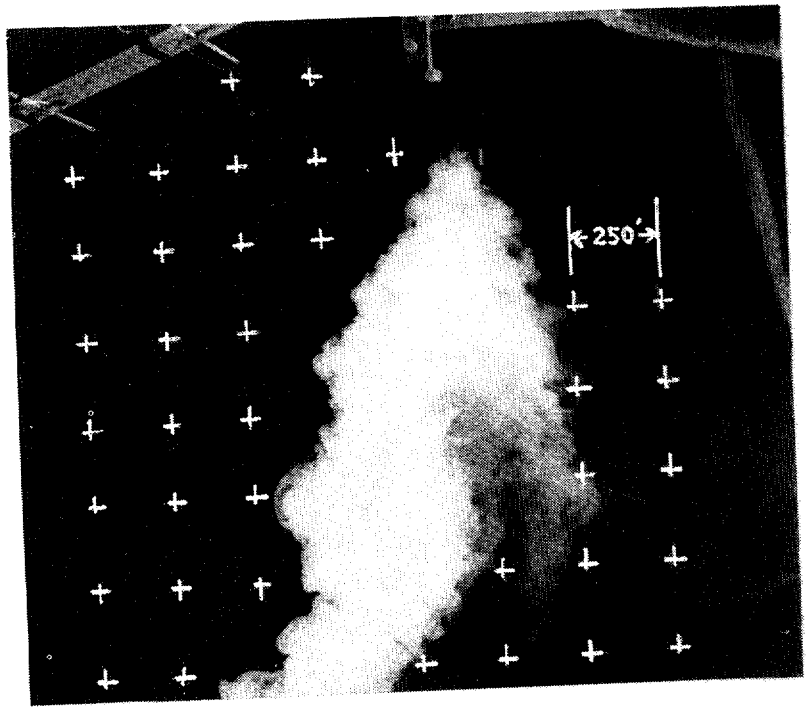


Photo No. 4

Indian Point III Model

PLUME AT CURRENT OF 1.0 ft/sec

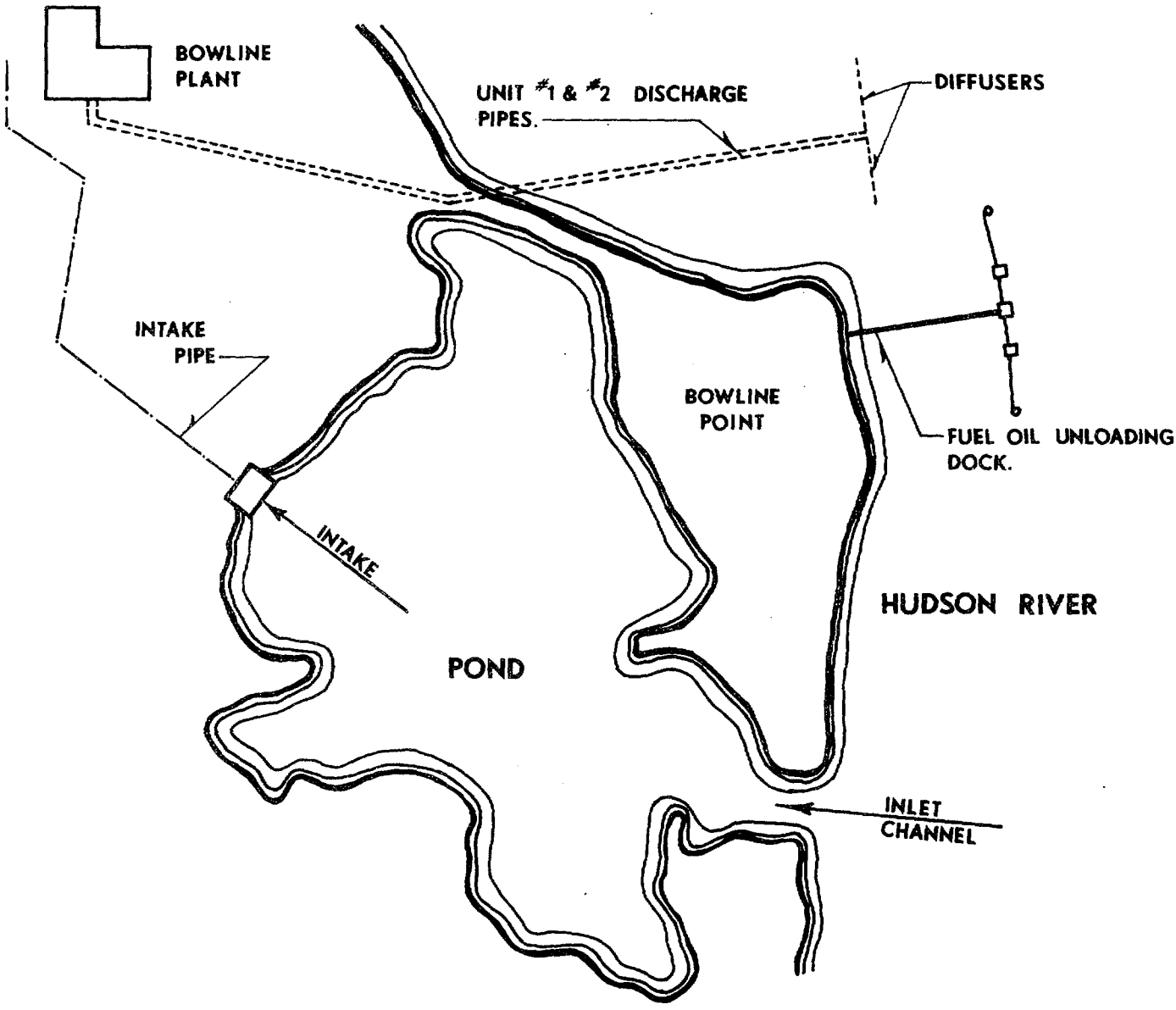
MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

ALDEN RESEARCH LABORATORIES

FIGURE 1



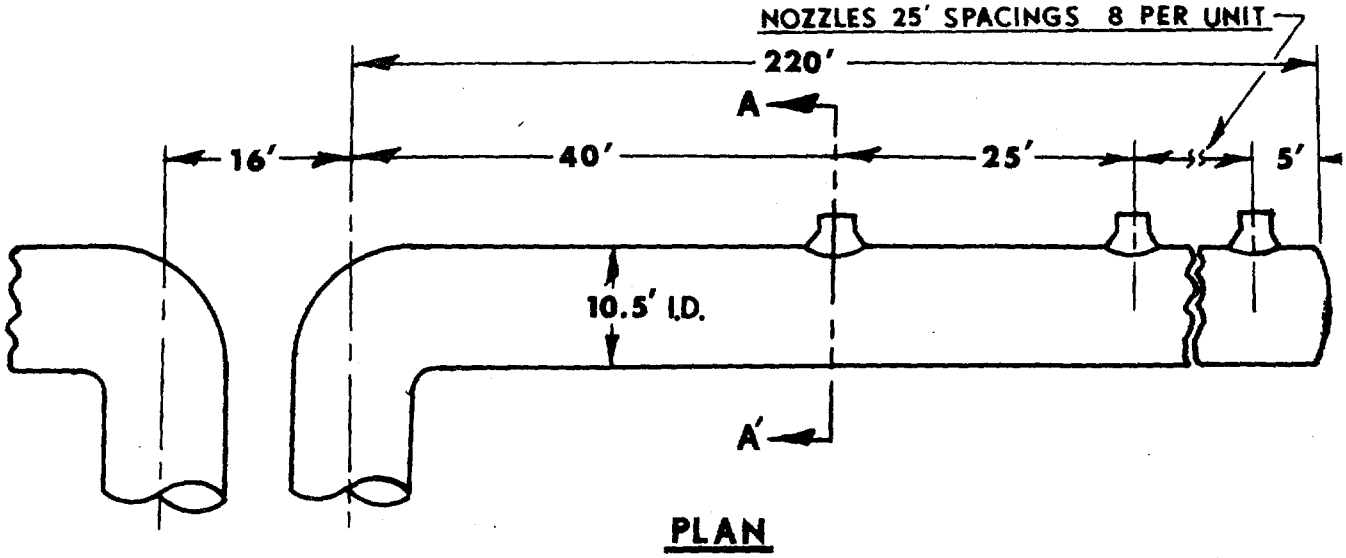
BOWLINE PLANT CIRCULATING WATER SYSTEM

MODEL TESTS OF BOWLINE DIFFUSERS

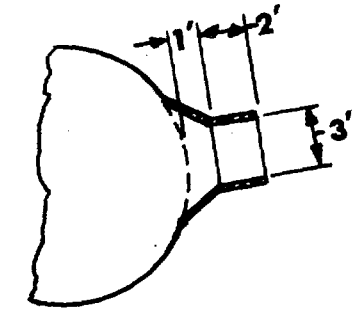
CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

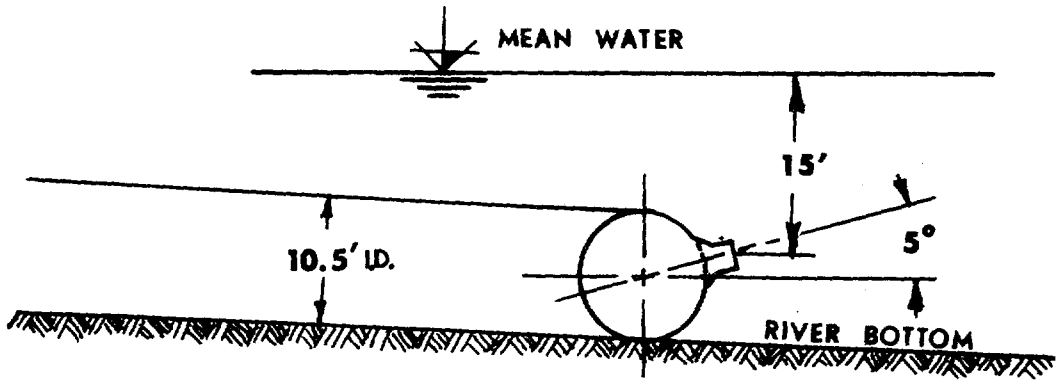
FIGURE 2



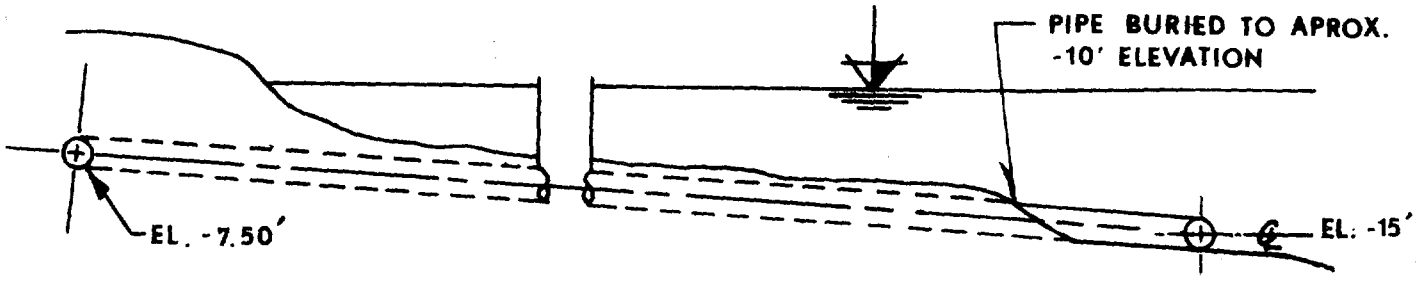
PLAN



NOZZLE DETAIL



SECTION A-A'



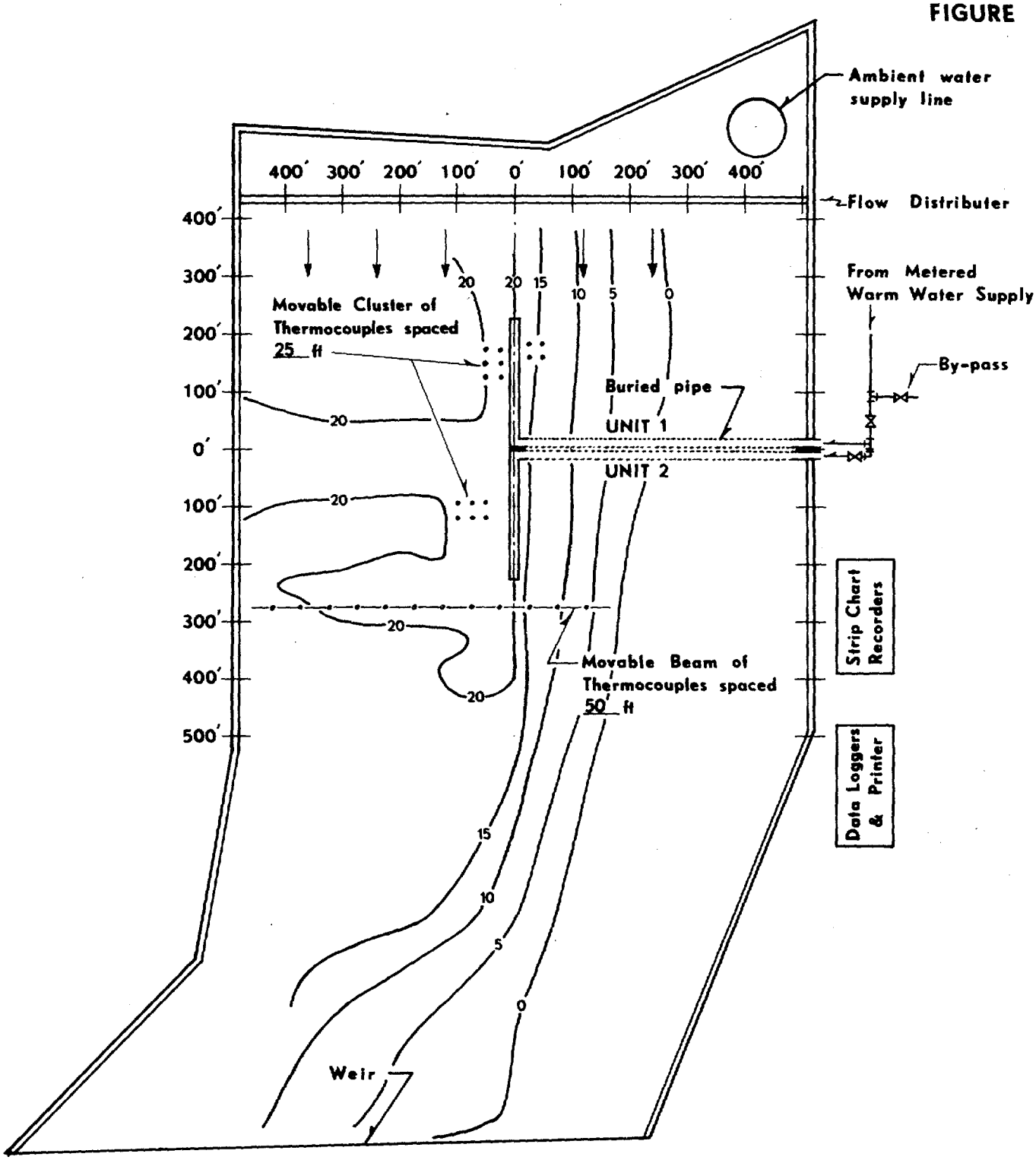
DIFFUSER DESIGN

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 3



GENERAL ARRANGEMENT

1/45 SCALE MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

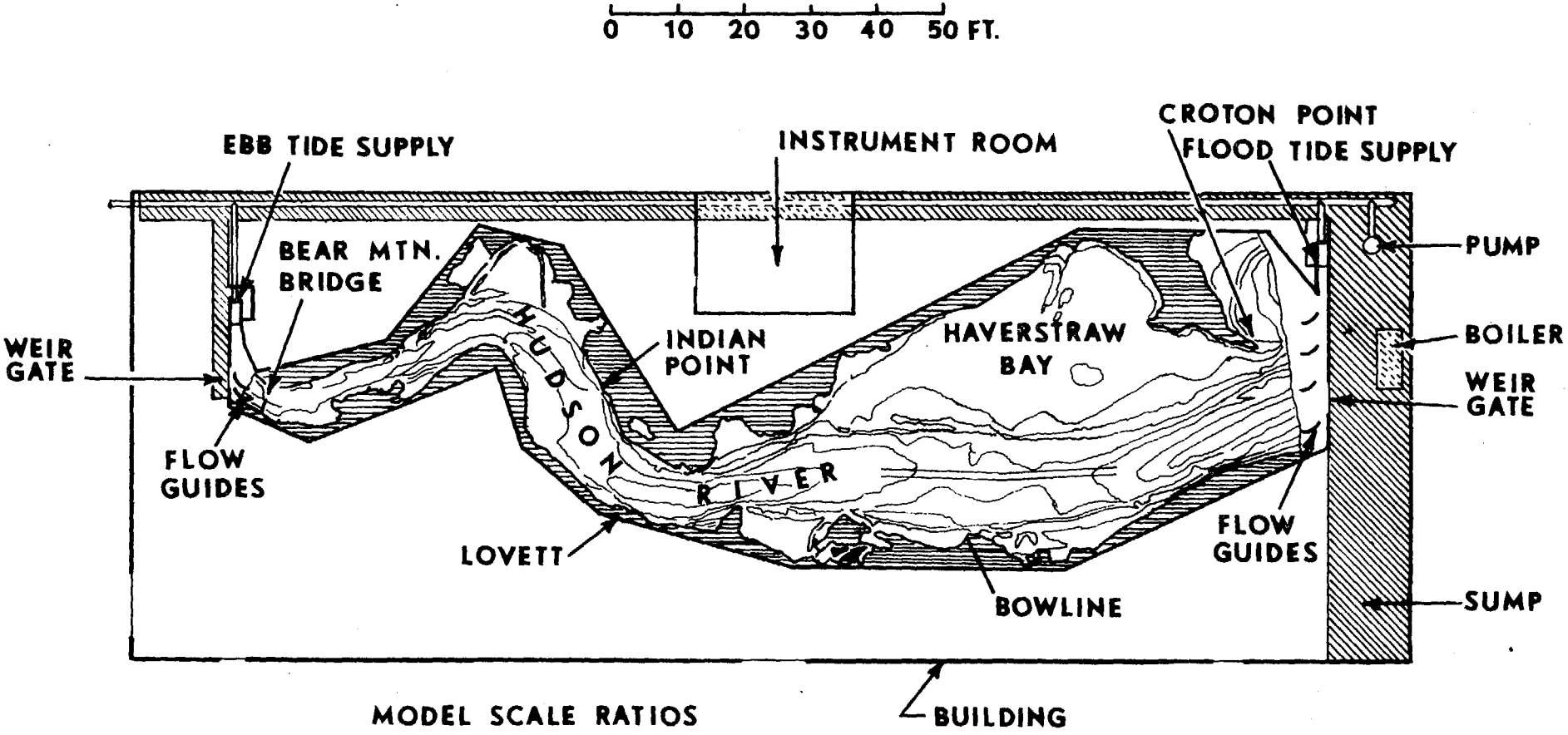
CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 4

INDIAN POINT III MODEL

GENERAL ARRANGEMENT



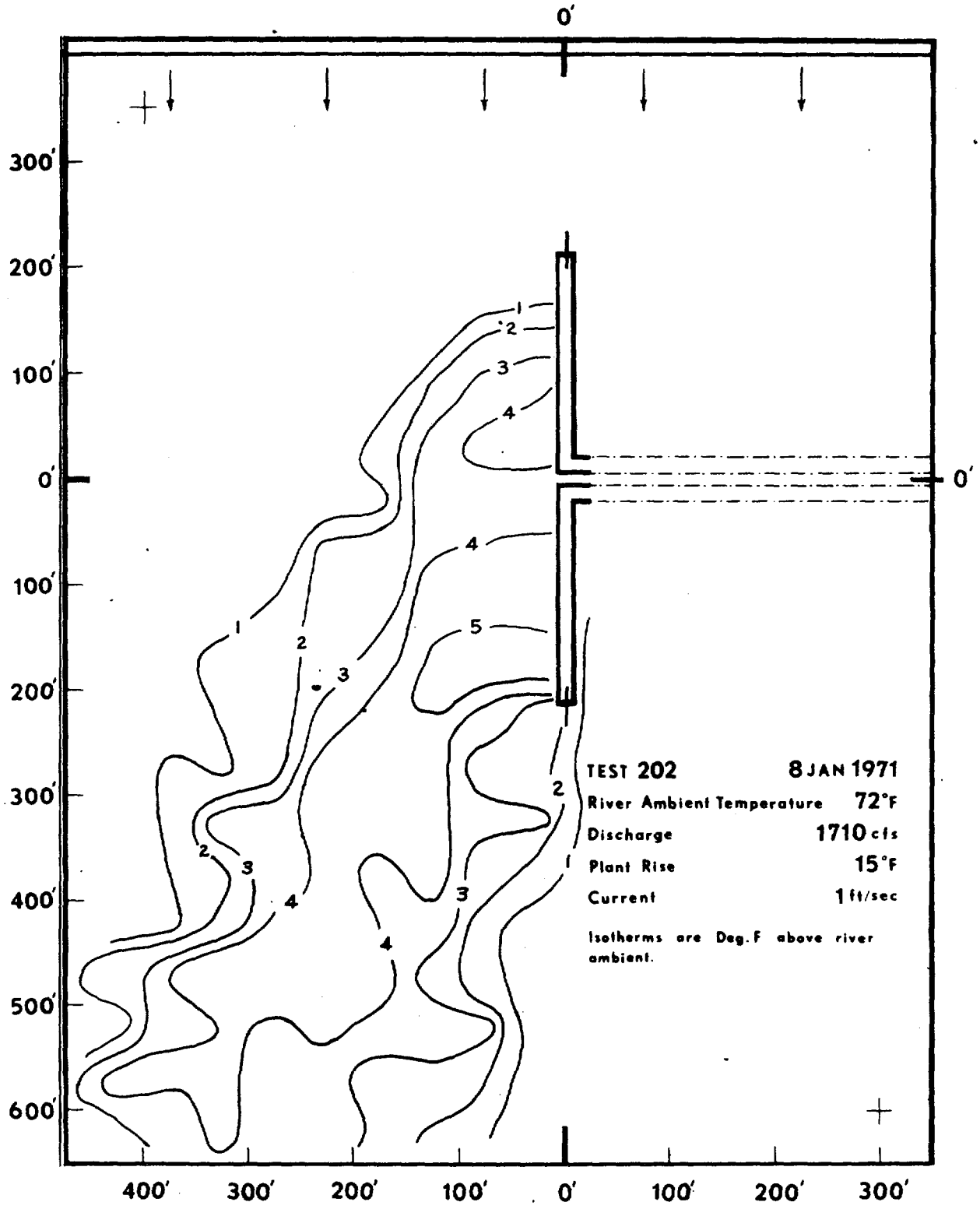
MODEL SCALE RATIOS
1:400 HORIZONTAL
1:80 VERTICAL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 5

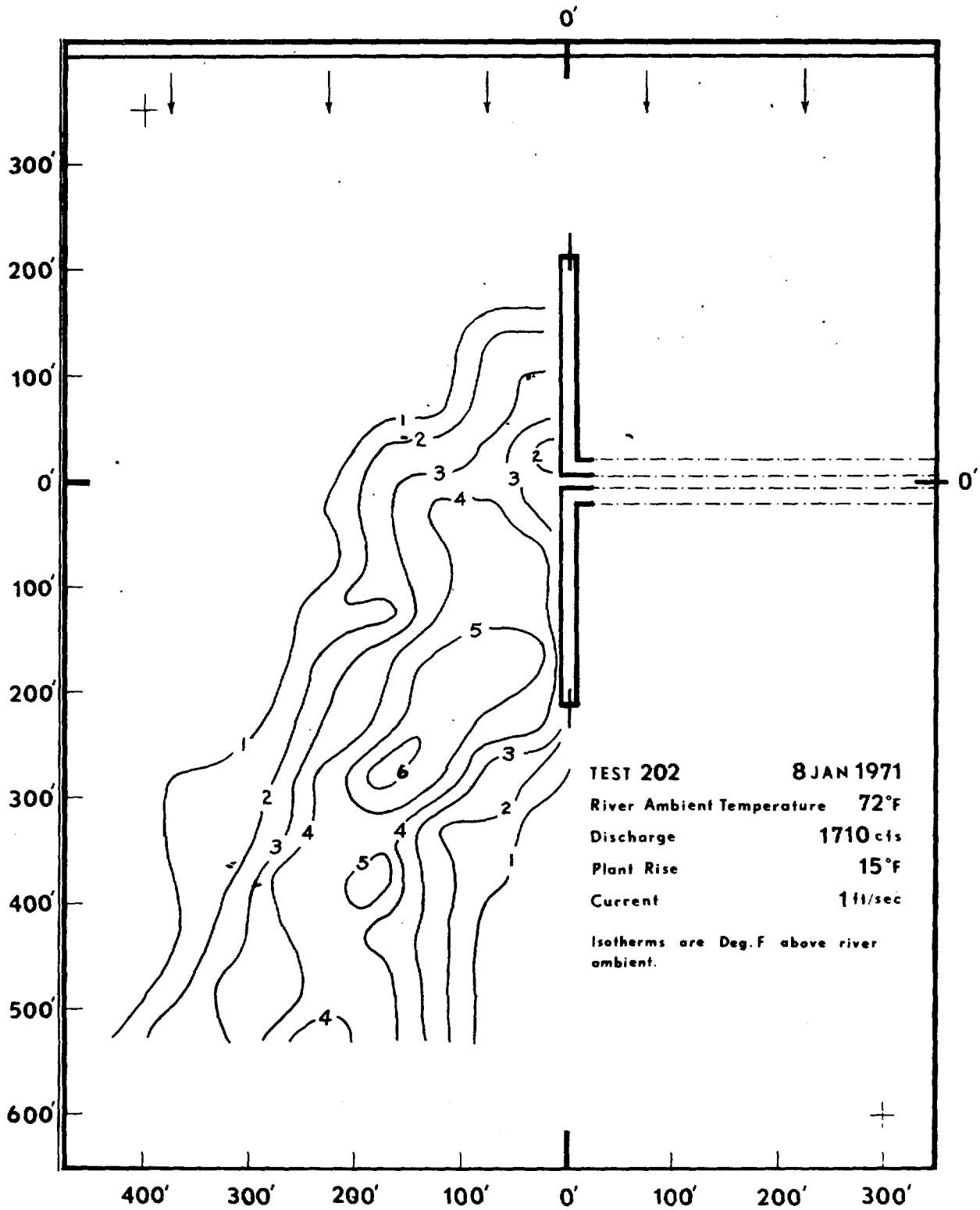


TEMPERATURE PATTERN at 1 ft DEPTH
1/45 MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK
ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 6



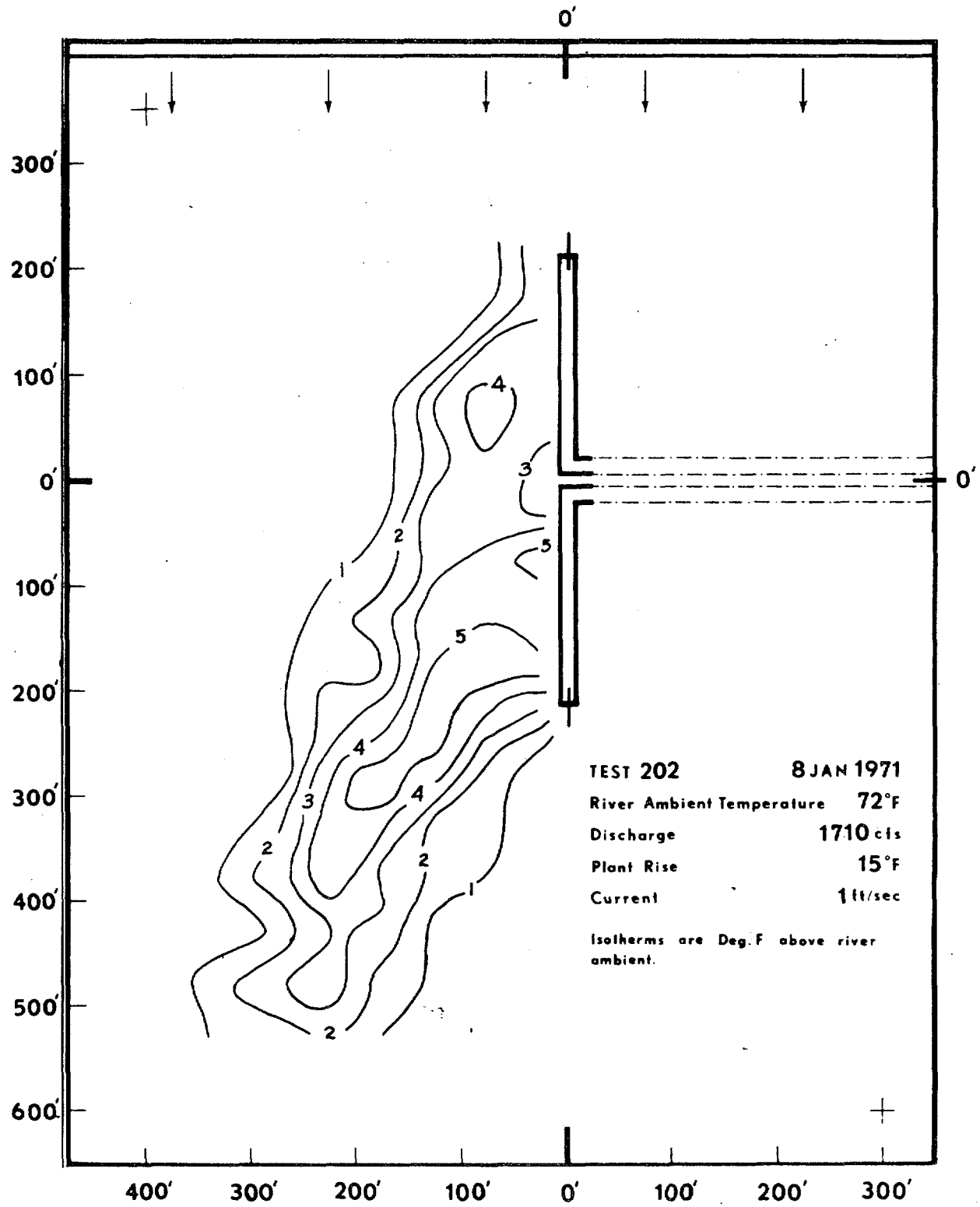
TEMPERATURE PATTERN at 8 ft DEPTH
1/45 MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 7

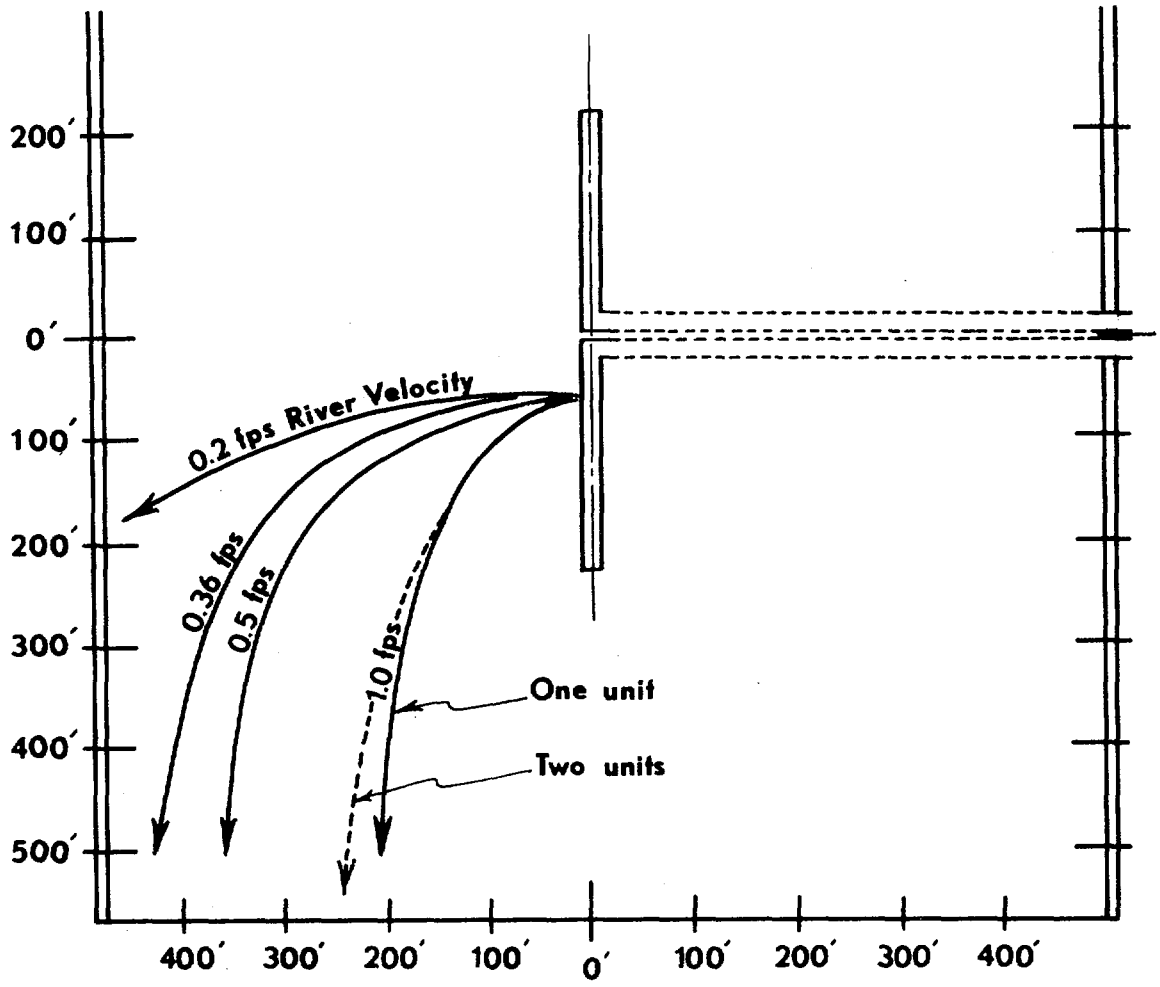


TEMPERATURE PATTERN at 15 ft DEPTH
1/45 MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK
ORANGE AND ROCKLAND UTILITIES, INC.

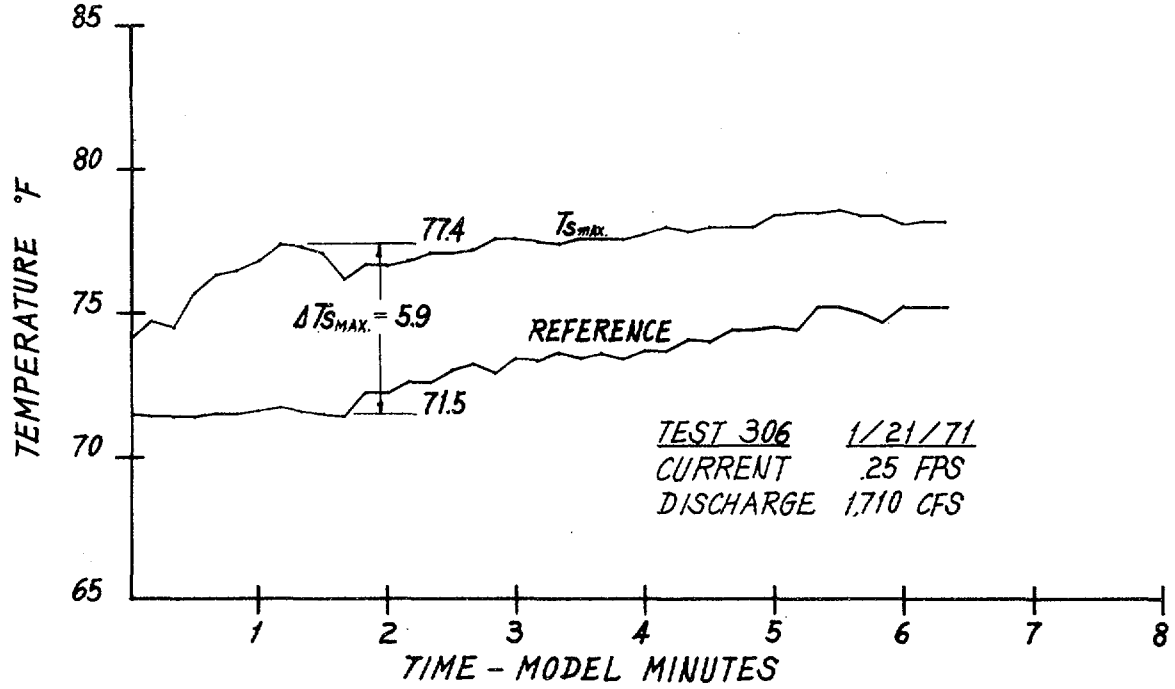
FIGURE 8

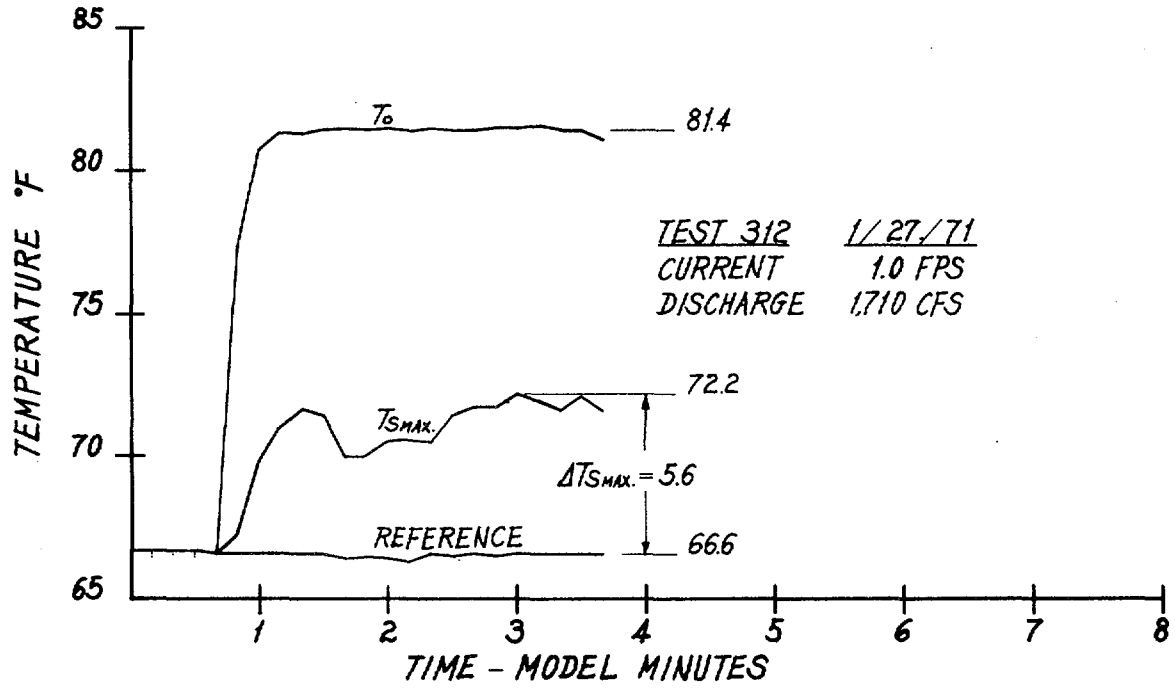


CENTER LINE TRAJECTORIES AT
VARIOUS RIVER CURRENTS
1/45 SCALE MODEL

MODEL TESTS OF BOWLINE DIFFUSERS
CONSOLIDATED EDISON COMPANY OF NEW YORK
ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 9





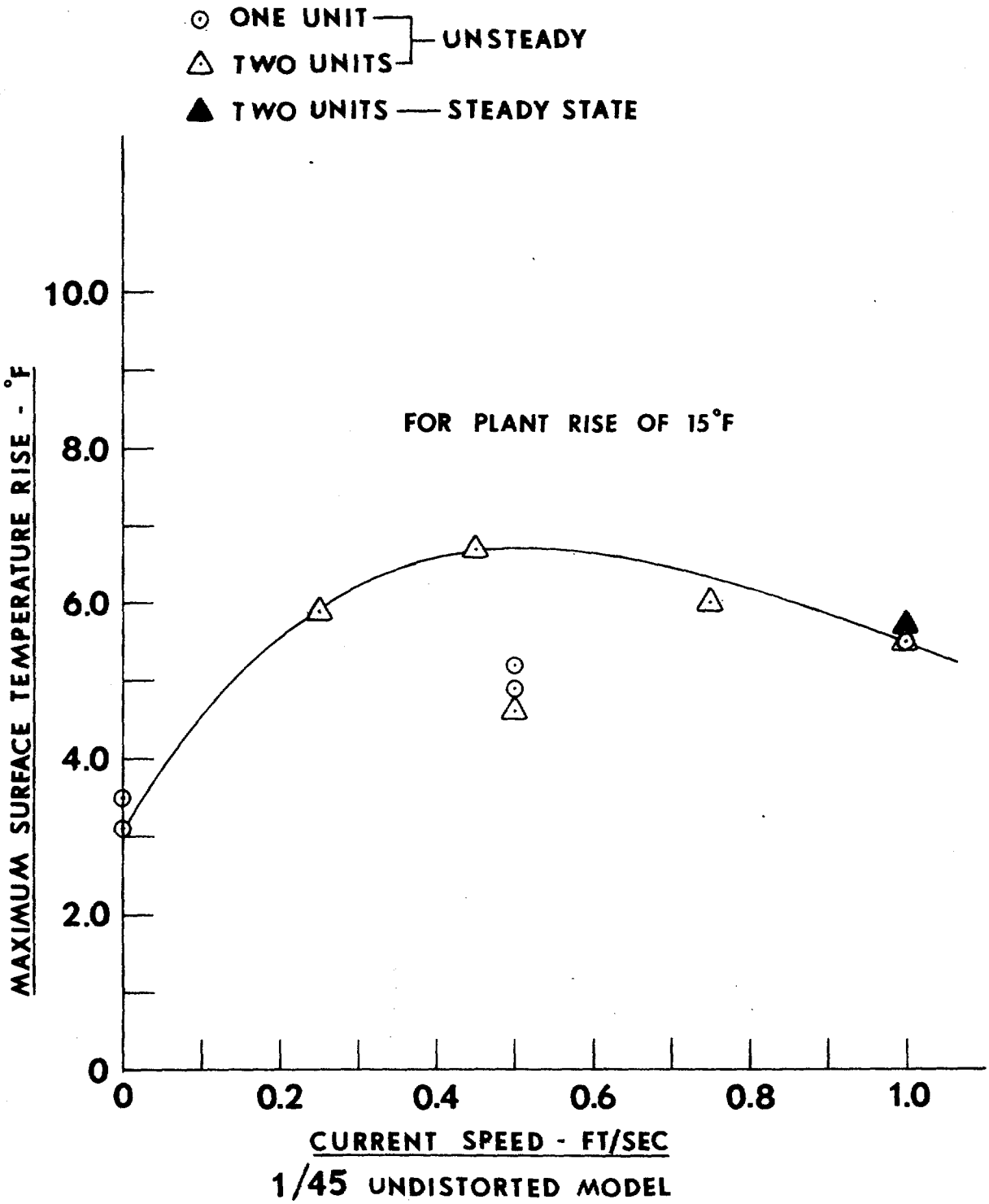
TEMPERATURE V.S TIME
1/45 UNDISTORTED MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 10



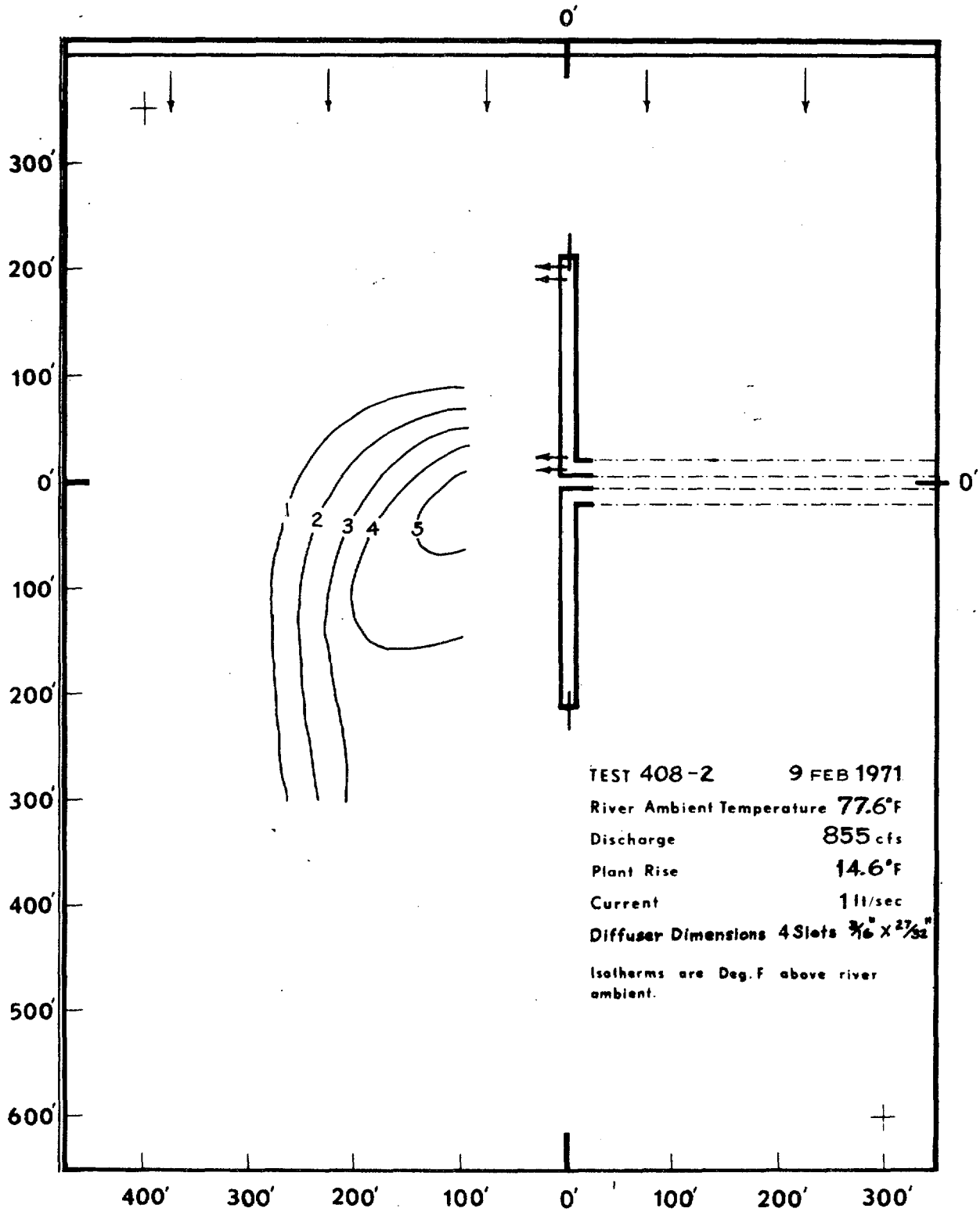
MAXIMUM SURFACE TEMPERATURE RISE VERSUS CURRENT SPEED

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 11



TEMPERATURE PATTERN at 1 ft DEPTH (ONE UNIT DISCHARGE)

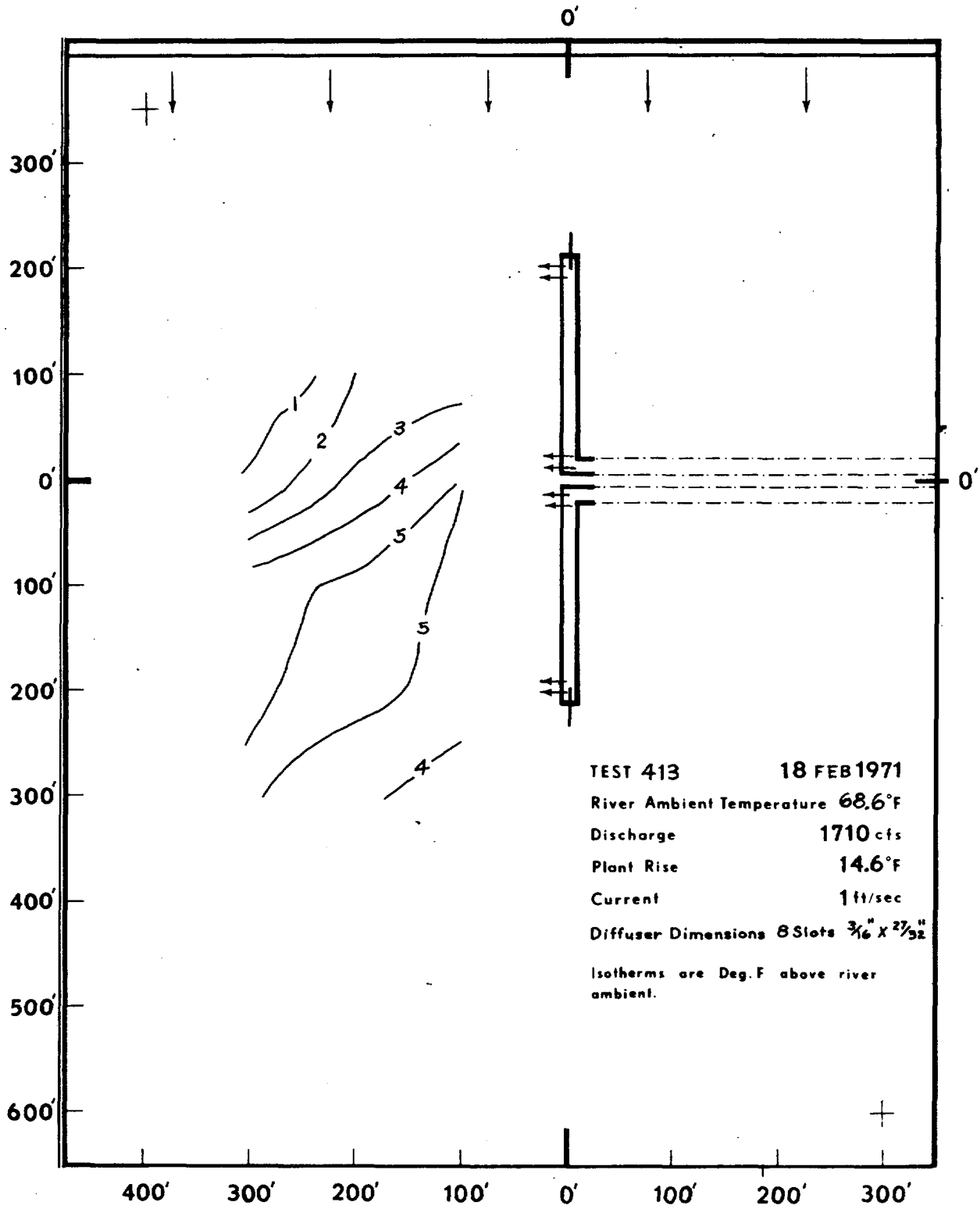
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 12



TEMPERATURE PATTERN at 1 ft DEPTH

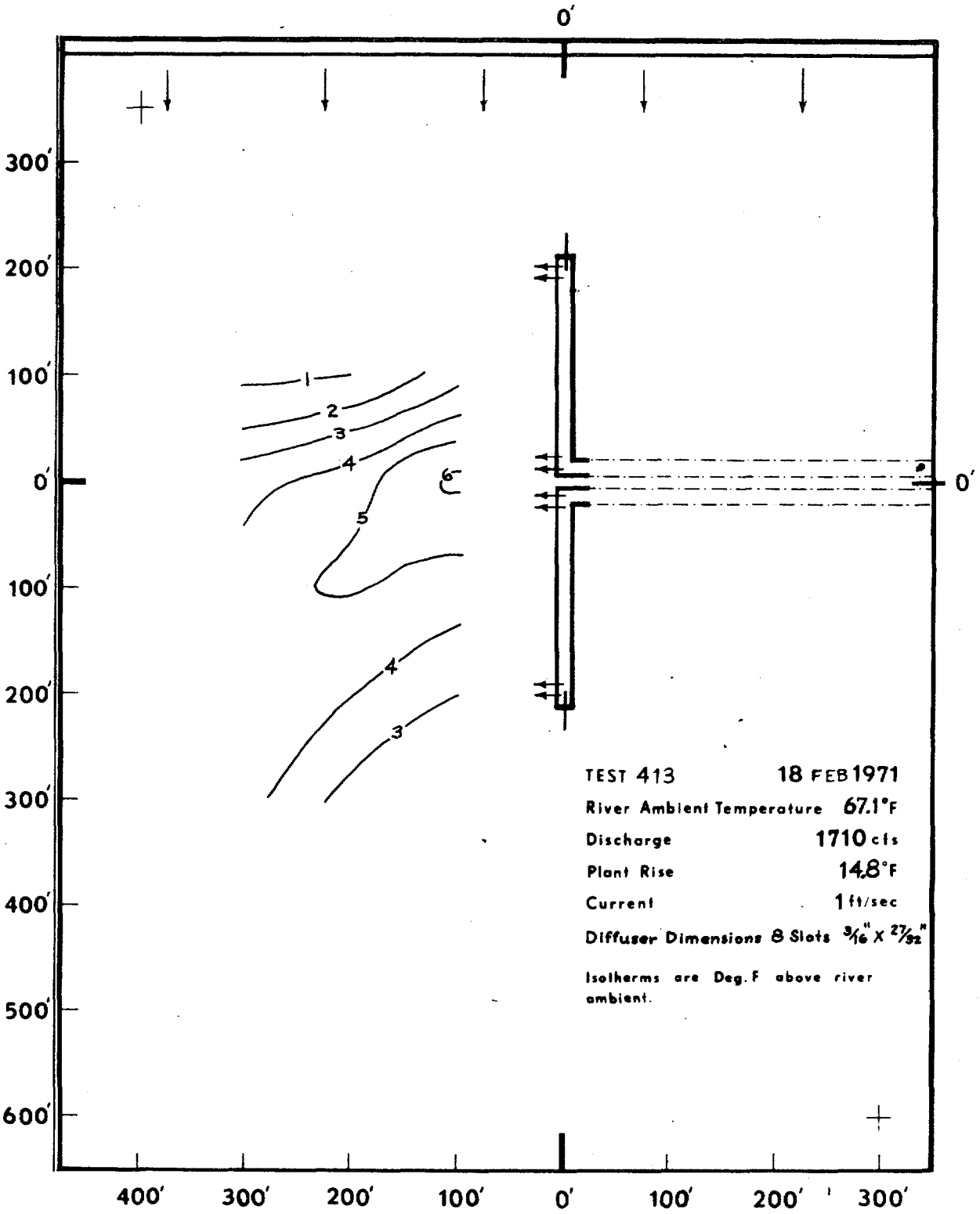
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 13



TEMPERATURE PATTERN at 5 ft DEPTH

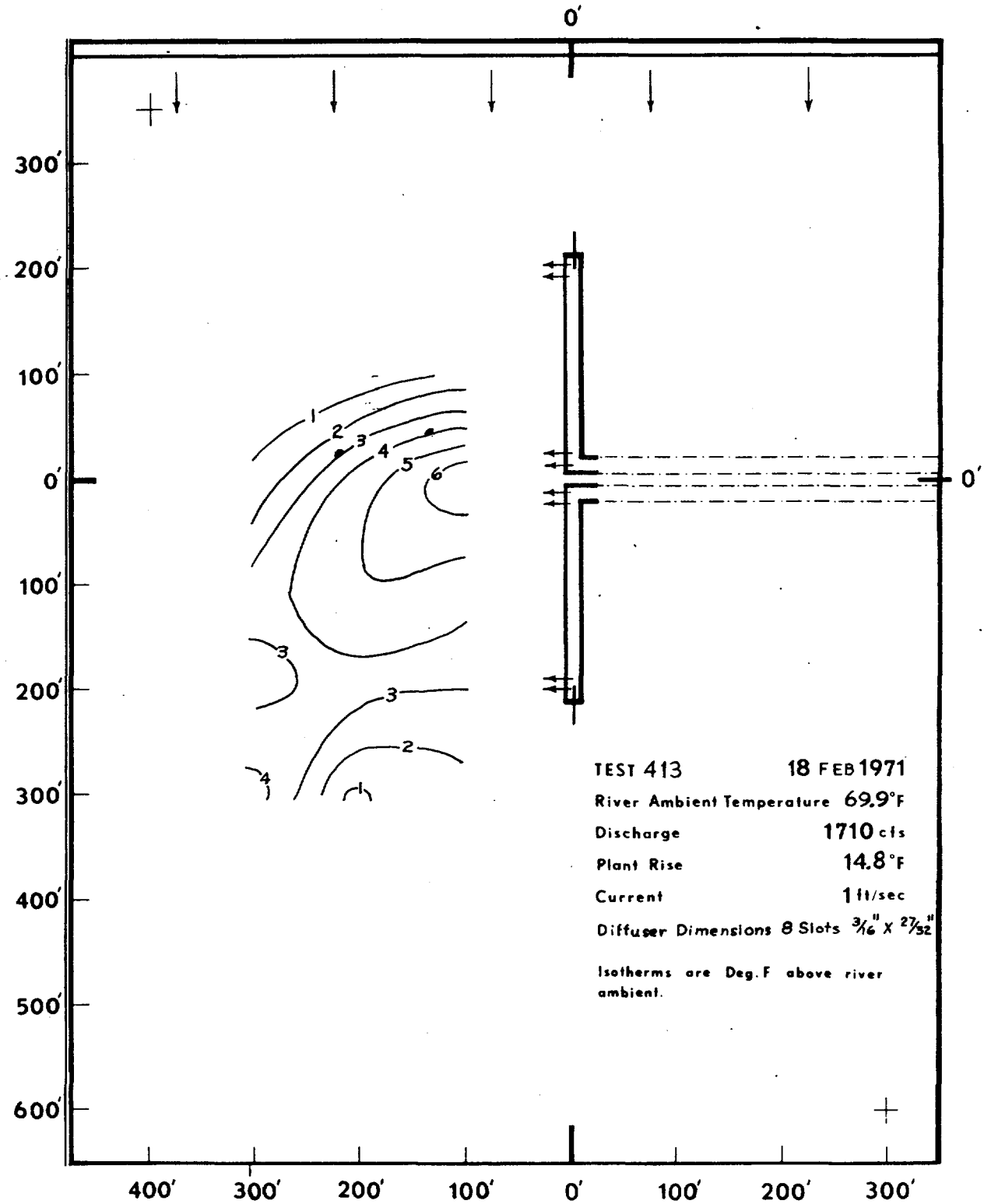
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 14



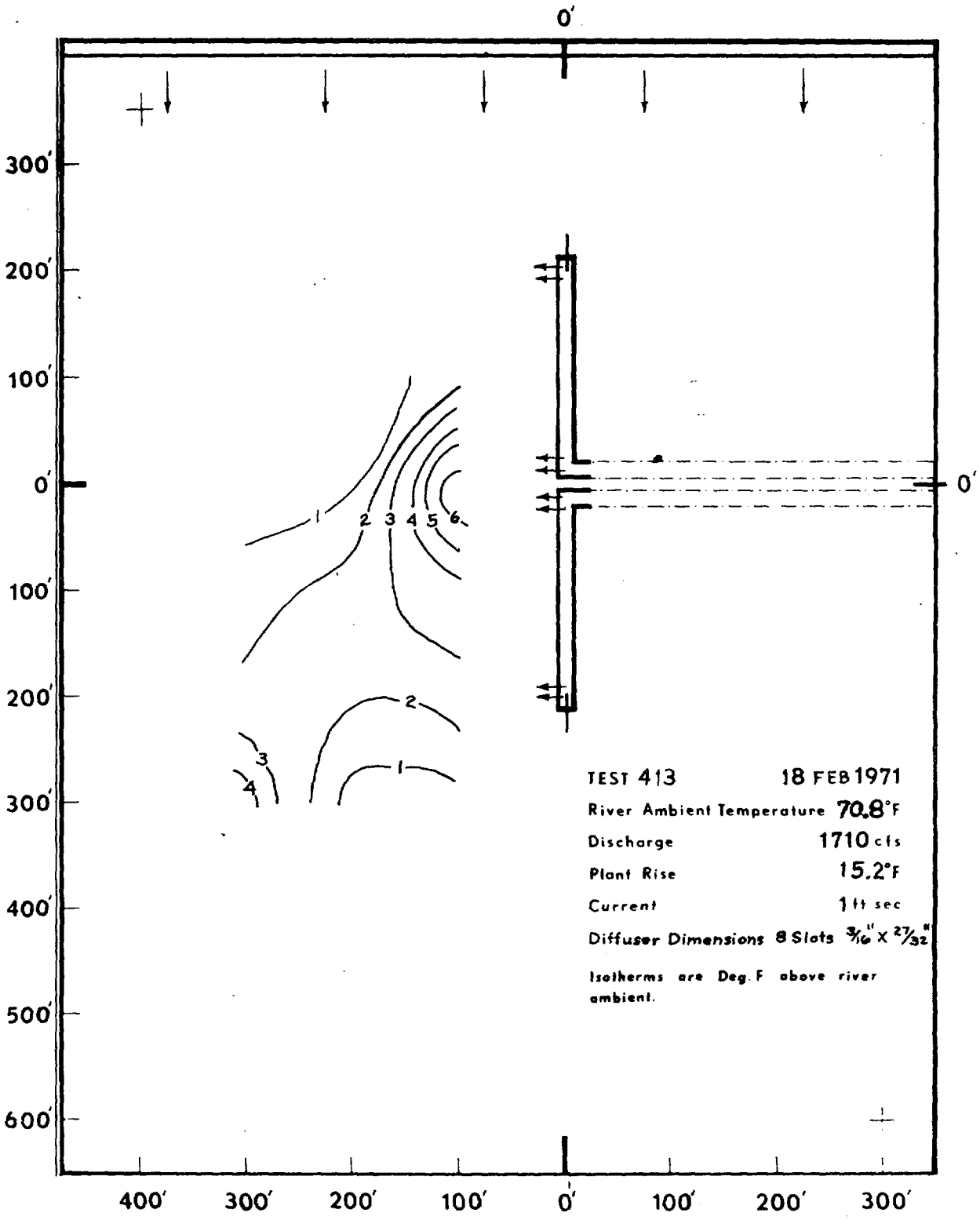
TEMPERATURE PATTERN at 10 ft DEPTH

INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.



TEMPERATURE PATTERN at 15 ft DEPTH

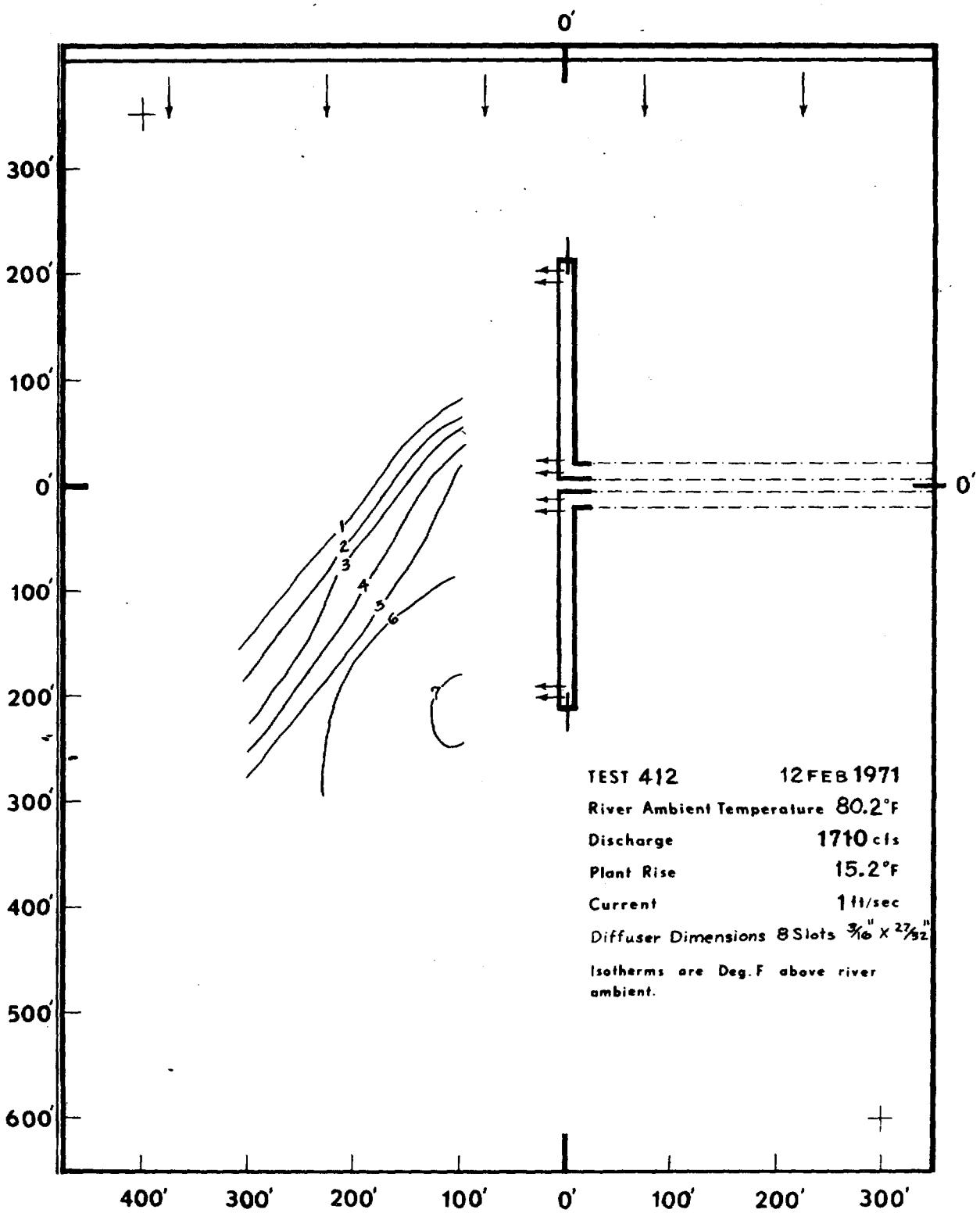
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 16



TEMPERATURE PATTERN at 1 ft DEPTH

INDIAN POINT III MODEL

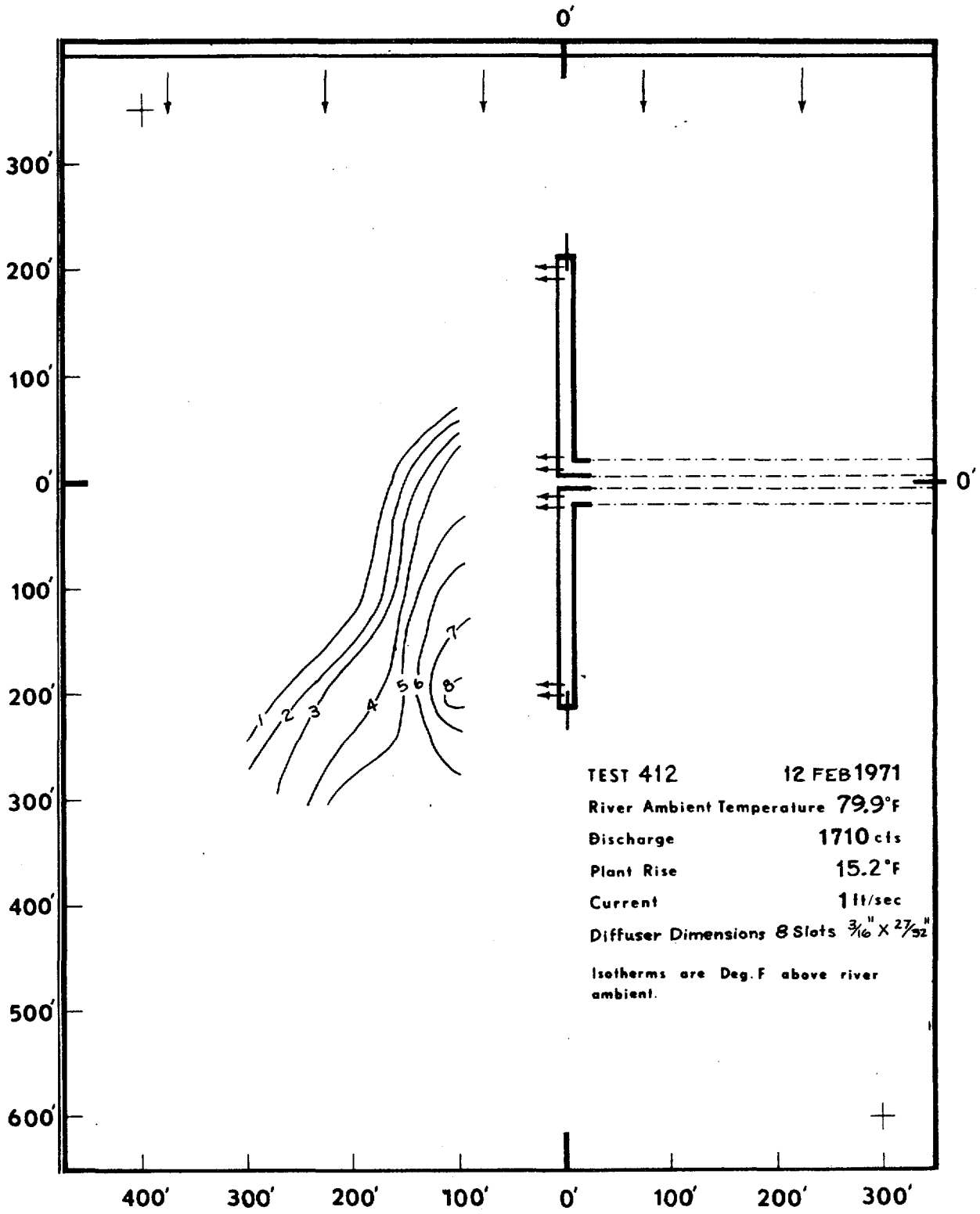
MODEL TESTS OF BOWLINE DIFFUSERS

ALDEN RESEARCH LABORATORIES

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 17



TEMPERATURE PATTERN at 5 ft DEPTH

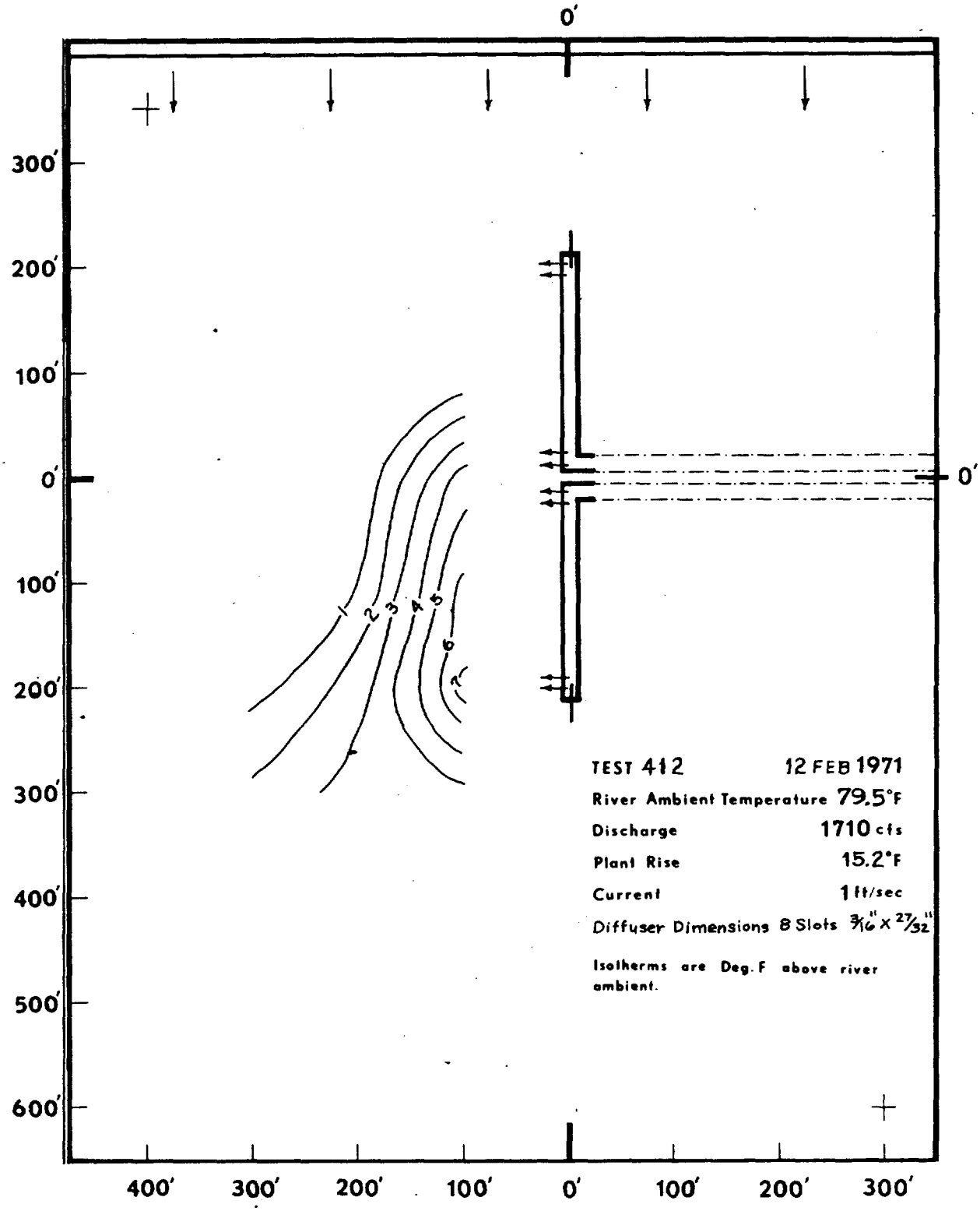
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 18



TEMPERATURE PATTERN at 10 ft DEPTH

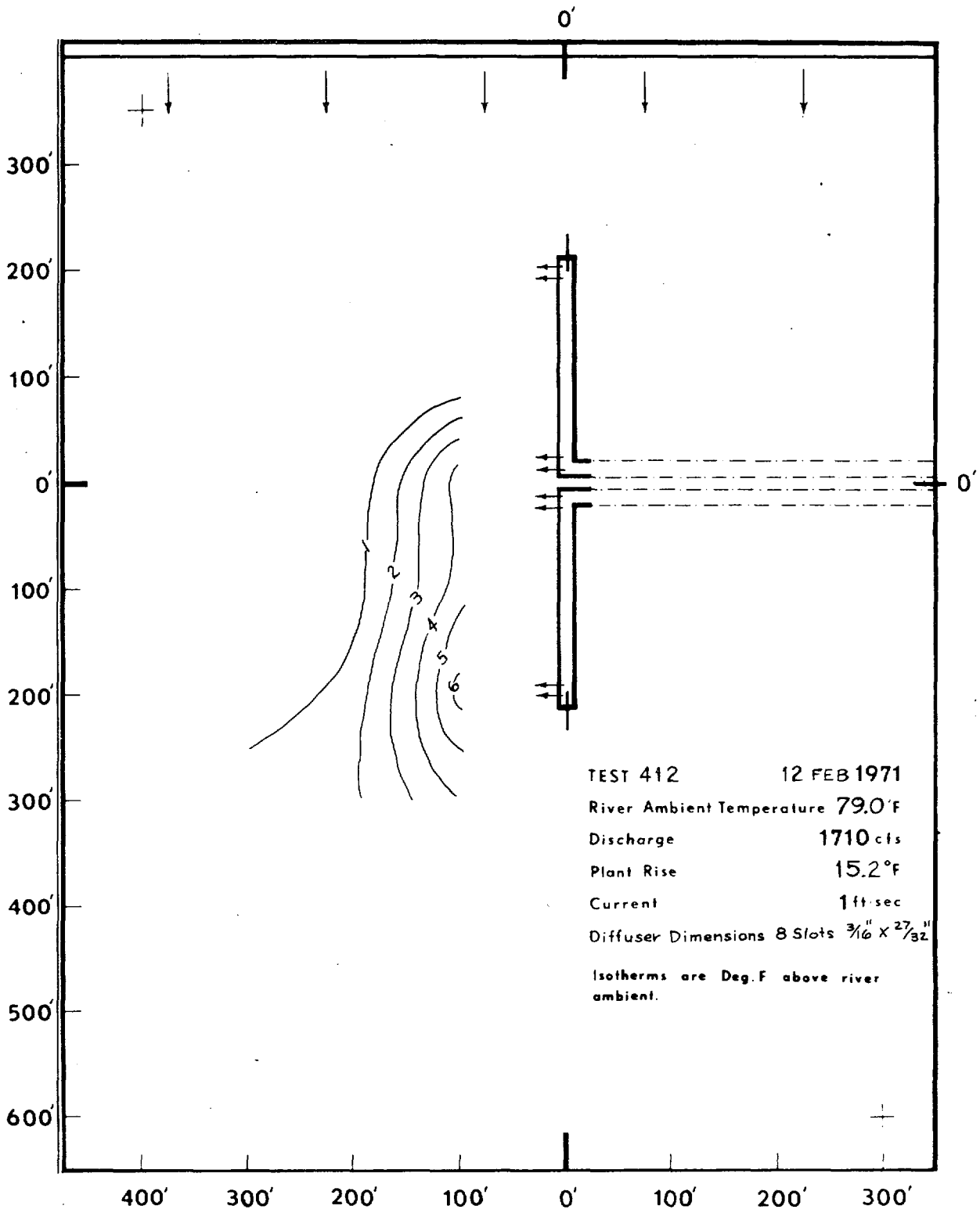
INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

FIGURE 19



TEMPERATURE PATTERN at 15 ft DEPTH

INDIAN POINT III MODEL

MODEL TESTS OF BOWLINE DIFFUSERS

CONSOLIDATED EDISON COMPANY OF NEW YORK

ORANGE AND ROCKLAND UTILITIES, INC.

ARL

Hudson River Power Plants Entrainment Abundance And Survival Raw Data Summaries 1975

Roseton Generating Station

Danskammer Point Generating Station

Bowline Point Generating Station

Lovett Generating Station

Prepared for

Central Hudson Gas & Electric Corporation

Orange & Rockland Utilities, Inc.



Prepared by
ECOLOGICAL ANALYSTS, INC.

CONTENTS

		Page
1.	ENTRAINMENT SURVIVAL RAW DATA SUMMARIES	
1.1	ROSETON GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975	1.1-1 - 1.1-82
1.2	DANSKAMMER POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975	1.2-1 - 1.2-44
1.3	BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975	1.3-1 - 1.3-41
2.	ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES	
2.1	ROSETON GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975	2.1-1 - 2.1-50
2.2	DANSKAMMER POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975	2.2-1 - 2.2-17
2.3	BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975	2.3-1 - 2.3-44
3.	ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES	
3.1	BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1975	3.1-1 - 3.1-48

3.2 LOVETT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1975 3.2-1 - 3.2-50

1. Entrainment Survival Raw Data Summaries

1.1 ROSETON GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/28/75	IN	21:50	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/28/75	DI	21:40	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	23:27	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	23:25	2	X	-9999.	-9.9	25.3	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	00:33	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	02:05	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	03:05	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	03:10	2	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	IN	04:35	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	04:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	05:30	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	05:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/29/75	DI	21:23	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	22:46	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	22:45	2	X	-9999.	-9.9	28.8	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	IN	00:13	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	01:31	2	X	-9999.	-9.9	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	DI	01:29	2	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	03:20	2	X	-9999.	-9.9	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	05:14	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	05:17	2	X	-9999.	-9.9	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	22:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	IN	23:18	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/02/75	DI	23:32	2	X	-9999.	-9.9	25.0	2	0	1	2	1	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/03/75	IN	02:13	2	X	-9999.	-9.9	21.0	3	0	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/03/75	DI	02:12	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	03:18	2	X	-9999.	-9.9	21.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/03/75	DI	03:27	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	04:37	2	X	-9999.	-9.9	20.8	2	1	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	DI	04:49	2	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/75	IN	05:49	2	X	-9999.	-9.9	21.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/75	DI	05:48	2	X	-9999.	-9.9	25.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	IN	22:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	21:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	23:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	23:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	00:05	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	01:20	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	02:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	03:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	03:45	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	05:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:50	2	X	-9999.	-9.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	IN	06:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	05:59	2	X	-9999.	-9.9	25.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/04/75	IN	21:31	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	21:33	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:40	2	X	-9999.	-9.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	DI	22:42	2	X	-9999.	-9.9	26.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	IN	23:45	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	23:49	2	X	-9999.	-9.9	26.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/05/75	IN	00:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:50	2	X	-9999.	-9.9	25.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/02/75	IN	02:13	2	X	-9999.	-9.9	21.0	3	0	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/02/75	DI	02:12	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	03:18	2	X	-9999.	-9.9	21.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/03/75	DI	03:27	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	04:37	2	X	-9999.	-9.9	20.8	2	1	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	DI	04:49	2	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/75	IN	05:49	2	X	-9999.	-9.9	21.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/75	DI	05:48	2	X	-9999.	-9.9	25.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	IN	20:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	21:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	23:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	23:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	00:05	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	01:20	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	02:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	03:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	03:45	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	05:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:50	2	X	-9999.	-9.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	IN	06:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	05:59	2	X	-9999.	-9.9	25.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/04/75	IN	21:31	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	21:33	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:40	2	X	-9999.	-9.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	DI	22:42	2	X	-9999.	-9.9	26.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	IN	23:45	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	23:49	2	X	-9999.	-9.9	26.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/05/75	IN	00:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:50	2	X	-9999.	-9.9	25.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED, D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/05/75	IN	01:57	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	03:15	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	03:05	2	X	-9999.	-9.9	24.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	04:25	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	04:25	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	05:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	05:25	2	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	21:70	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	21:44	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	22:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	22:46	2	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	23:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	23:41	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:05	2	X	-9999.	-9.9	21.0	4	0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/06/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:07	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/06/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/06/75	IN	03:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	03:07	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	04:17	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	23:00	1	X	-9999.	-9.9	21.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/08/75	DI	21:50	1	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/75	IN	23:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	22:58	1	X	-9999.	-9.9	27.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	23:59	1	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	00:04	1	X	-9999.	-9.9	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	01:00	1	X	-9999.	-9.9	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	01:07	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	02:14	1	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	02:21	1	X	-9999	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/75	IN	03:38	1	X	-9999.	-9.9	21.0	1	5	2	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/10/75	DI	03:32	1	X	-9999.	-9.9	25.0	0	1	4	1	4	0	5	0	5	0	5	0	5	0	5	0	5
06/10/75	IN	04:37	1	X	-9999.	-9.9	21.0	1	3	2	1	5	0	6	0	6	0	6	0	6	0	6	0	6
06/10/75	DI	05:01	1	X	-9999.	-9.9	25.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	05:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	06:02	1	X	-9999.	-9.9	24.0	1	0	2	1	2	1	2	1	2	0	3	0	3	0	3	0	3
06/10/75	IN	21:35	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	22:45	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:48	1	X	-9999.	-9.9	26.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	23:50	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	23:52	1	X	-9999.	-9.9	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	00:50	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	00:46	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:52	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	01:52	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	02:48	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	02:48	1	X	-9999.	-9.9	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	03:46	1	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	03:48	1	X	-9999.	-9.9	25.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	IN	04:43	1	X	-9999.	-9.9	22.0	1	2	2	1	4	1	4	0	5	0	5	0	5	0	5	0	5
06/11/75	DI	04:49	1	X	-9999.	-9.9	25.0	1	0	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/11/75	IN	05:57	1	X	-9999.	-9.9	22.0	1	1	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	05:56	1	X	-9999.	-9.9	26.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	21:30	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	21:39	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	22:28	1	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	IN	23:22	1	X	-9999.	-9.9	22.0	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	23:26	1	X	-9999.	-9.9	28.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/12/75	IN	00:31	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	1	X	-9999.	-9.9	26.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	01:28	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	01:47	1	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	IN	02:43	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	02:46	1	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	05:37	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	05:42	1	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	04:35	1	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	04:40	1	X	-9999.	-9.9	25.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/12/75	IN	05:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	05:38	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	21:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	22:34	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	23:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:18	1	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	00:15	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	00:18	1	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	01:14	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	01:18	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	02:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	02:18	1	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	03:15	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:20	1	X	-9999.	-9.9	25.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	04:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	04:26	1	X	-9999.	-9.9	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	05:21	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	05:26	1	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/75	IN	21:44	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	21:56	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	22:53	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:56	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/16/75	IN	23:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:55	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:42	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	00:47	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	01:36	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:44	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	02:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:36	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	03:38	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:43	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:35	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	05:22	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:25	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	21:37	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	21:36	1	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:33	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:13	1	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	00:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:09	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:11	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:59	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:05	1	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	02:59	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:00	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:49	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:50	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	04:39	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	1	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/75	IN	05:23	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:25	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	06:15	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	06:10	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	21:35	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:33	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:31	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:35	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:26	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:31	1	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/19/75	IN	00:20	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:22	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:07	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	1
06/19/75	DI	01:13	1	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:56	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	01:58	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	02:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:57	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:48	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	04:02	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	04:54	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:00	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	05:45	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:50	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	21:31	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:33	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:20	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:20	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:59	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:03	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:48	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:54	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/20/75	IN	00:43	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:39	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:32	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	02:21	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	02:25	2	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/75	IN	03:06	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/75	DI	03:10	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	21:37	2	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	DI	21:41	2	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	IN	22:26	2	X	-9999.	-9.9	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	DI	22:41	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:12	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:14	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:57	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:03	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:43	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	01:25	2	X	-9999.	-9.9	23.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:38	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:03	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:05	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:41	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:41	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:21	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	03:24	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	04:13	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	05:23	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	06:04	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	06:03	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	IN	21:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:29	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:09	2	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	22:11	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:52	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:52	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:32	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:21	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:02	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:01	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:48	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:49	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:34	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:33	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:14	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	03:12	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:54	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:38	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	05:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	05:18	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	IN	06:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	06:06	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	21:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	21:37	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	22:32	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	22:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:16	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	00:10	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	00:11	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	00:59	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	01:40	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:39	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	02:33	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	02:34	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	03:18	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	03:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	04:02	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:09	2	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	04:51	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:51	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	05:40	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	05:42	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	21:34	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	21:36	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	22:20	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	22:20	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	23:10	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	23:07	2	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	23:50	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	23:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	00:30	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	00:35	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:22	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:29	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	02:10	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	02:18	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	03:00	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	03:02	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	03:45	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	03:52	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:30	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	05:20	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:24	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	20:33	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	20:45	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/75	IN	21:27	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	21:26	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:14	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:00	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:48	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:46	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:30	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:16	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:06	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	02:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:57	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:03	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:42	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:50	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:26	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:30	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:08	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:57	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	06:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:35	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:17	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	22:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:17	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	23:31	2	X	-9999.	-9.9	24.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	23:29	2	X	-9999.	-9.9	31.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/75	IN	00:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:13	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:00	2	X	-9999.	-9.9	30.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
07/02/75	IN	01:44	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:48	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:40	2	X	-9999.	-9.9	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:33	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:32	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:14	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	04:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:04	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:49	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:55	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:41	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/75	IN	22:40	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	22:34	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:35	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:21	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:18	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:04	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:02	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:51	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:50	2	X	-9999.	-9.9	32.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/75	IN	02:38	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:33	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:31	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	DI	03:22	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	04:18	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:15	2	X	-9999.	-9.9	31.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:23	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:19	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:09	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:07	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:52	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:51	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	20:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:06	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:05	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:58	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:44	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	00:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- YOLK SAC LA

							NUMBER OF INDIVIDUALS													
							INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/26/75	IN	21:50	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/75	DI	21:40	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/75	IN	23:37	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/75	DI	23:25	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	DI	00:33	2	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/27/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	DI	02:50	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	IN	03:05	2	X	-9999.	-9.9	19.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	DI	03:10	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	IN	04:35	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	DI	04:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	IN	05:25	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	DI	05:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:28	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	22:46	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/28/75	DI	22:45	2	X	-9999.	-9.9	28.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	00:13	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	01:31	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	01:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	04:20	2	X	-9999.	-9.9	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	00:14	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	00:17	2	X	-9999.	-9.9	26.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	22:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/[illegible]/75	IN	23:18	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	23:32	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE, IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- YOLK SAC LA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/09/75	IN	02:13	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	02:12	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	03:18	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	03:27	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	04:37	2	X	-9999.	-9.9	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	04:49	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/09/75	IN	05:49	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/09/75	DI	05:48	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	22:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	21:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	23:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	23:54	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	00:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	01:20	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	02:40	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	02:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	03:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	03:45	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	05:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	04:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	06:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	05:59	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	21:31	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	21:38	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	22:40	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	22:42	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	23:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	23:49	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	00:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- YOLK SAC LA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/02/75	IN	01:57	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	IN	03:15	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	03:03	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	IN	04:25	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	04:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	05:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	05:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	21:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	21:46	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	22:46	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	23:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	23:41	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:07	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	03:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	03:07	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	04:17	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	22:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	21:50	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	IN	23:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	22:58	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	IN	23:59	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:04	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	01:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	01:07	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	02:14	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	02:21	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	01:28	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	01:47	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	02:43	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	02:46	1	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	03:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	03:42	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	04:35	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	04:40	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	05:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	05:38	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	21:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	22:34	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	23:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:18	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	00:15	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	00:19	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	01:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:18	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	02:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	02:18	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	03:10	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:20	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	04:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	04:26	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	05:21	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	05:26	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	21:44	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	21:54	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	22:53	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:56	1	X	-9999.	-9.9	28.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/16/75	IN	23:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:55	1	X	-9999.	-9.9	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/75	IN	00:42	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	00:47	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	01:36	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:34	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	02:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:36	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	03:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:43	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:35	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	05:22	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:25	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	21:37	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	21:36	1	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:33	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:18	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	00:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:09	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:11	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:59	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:05	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:59	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:00	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:49	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:50	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	04:39	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (MMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	IN	21:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:29	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:09	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:11	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:52	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:52	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:32	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:21	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:02	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:01	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:43	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:49	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:34	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:33	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:12	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:54	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:38	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	05:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	05:18	2	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/25/75	IN	06:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	06:06	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	21:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	21:37	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	22:32	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	22:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:16	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	06:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:33	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:31	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:13	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:13	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:00	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:47	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:48	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:40	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:33	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:32	2	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/02/75	IN	04:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:04	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:33	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:49	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:05	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:41	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/28/75	IN	21:50	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/28/75	DI	21:40	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/28/75	IN	23:27	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/28/75	DI	23:23	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	00:33	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	02:00	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	03:03	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	03:10	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	04:35	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	04:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	05:25	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	05:31	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	DI	21:23	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/29/75	IN	22:46	2	X	-9999.	-9.9	21.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
05/29/75	DI	22:45	2	X	-9999.	-9.9	28.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	00:15	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	01:31	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	01:28	2	X	-9999.	-9.9	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/30/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	03:20	2	X	-9999.	-9.9	25.8	2	0	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2
05/30/75	IN	05:14	2	X	-9999.	-9.9	21.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/30/75	DI	05:17	2	X	-9999.	-9.9	26.7	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/31/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/31/75	DI	22:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	23:18	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/01/75	DI	23:32	2	X	-9999.	-9.9	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	2	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/03/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	4	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/03/75	IN	02:13	2	X	-9999.	-9.9	21.0	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/03/75	DI	02:12	2	X	-9999.	-9.9	25.0	2	0	3	2	3	1	4	0	5	0	5	0	5	0	5	0	5
04/03/75	IN	03:18	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/11/75	DI	03:27	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/75	IN	04:37	2	X	-9999.	-9.9	20.8	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/[illegible]/75	DI	04:49	2	X	-9999.	-9.9	25.0	2	6	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8
04/03/75	IN	05:49	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	DI	05:48	2	X	-9999.	-9.9	25.0	2	1	7	0	10	0	10	0	10	0	10	0	10	0	10	0	10
04/03/75	IN	22:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/75	DI	21:41	2	X	-9999.	-9.9	26.0	4	0	2	4	2	3	3	2	4	2	4	2	4	2	4	2	4
04/03/75	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	DI	23:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/75	IN	23:56	2	X	-9999.	-9.9	21.0	0	4	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4
04/04/75	DI	00:03	2	X	-9999.	-9.9	26.0	2	2	2	2	4	2	4	2	4	0	6	0	6	0	6	0	6
04/04/75	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/[illegible]/75	DI	01:20	2	X	-9999.	-9.9	25.0	2	2	1	2	3	0	5	0	5	0	5	0	5	0	5	0	5
04/04/75	IN	02:45	2	X	-9999.	-9.9	21.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
04/04/75	DI	02:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/04/75	IN	03:54	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	DI	03:43	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/04/75	IN	05:03	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	DI	04:00	2	X	-9999.	-9.9	25.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/04/75	IN	06:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	DI	05:59	2	X	-9999.	-9.9	25.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
04/04/75	IN	21:31	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/[illegible]/75	DI	21:32	2	X	-9999.	-9.9	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/04/75	IN	22:40	2	X	-9999.	-9.9	21.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/04/75	DI	22:42	2	X	-9999.	-9.9	26.0	1	1	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2
04/04/75	IN	23:45	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/04/75	DI	23:49	2	X	-9999.	-9.9	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/05/75	IN	00:45	2	X	-9999.	-9.9	21.0	4	0	0	2	2	2	2	0	4	0	4	0	4	0	4	0	4
04/05/75	DI	00:30	2	X	-9999.	-9.9	25.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/03/75	IN	01:57	2	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/03/75	IN	03:15	2	X	-9999.	-9.9	21.0	0	2	3	2	3	0	5	0	5	0	5	0	5	0	5	0	5
06/03/75	DI	03:03	2	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/75	IN	04:35	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	04:25	2	X	-9999.	-9.9	24.0	1	1	1	1	2	1	2	0	3	0	3	0	3	0	3	0	3
06/03/75	IN	05:20	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	DI	05:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	21:40	2	X	-9999.	-9.9	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/75	DI	21:44	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	22:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	22:46	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	23:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	23:41	2	X	-9999.	-9.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	IN	01:05	2	X	-9999.	-9.9	21.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:07	2	X	-9999.	-9.9	21.0	0	4	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4
06/04/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/04/75	IN	03:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	03:07	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	04:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:17	2	X	-9999.	-9.9	23.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/09/75	IN	22:00	1	X	-9999.	-9.9	21.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
06/09/75	DI	21:50	1	X	-9999.	-9.9	26.0	0	2	5	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/09/75	IN	23:00	1	X	-9999.	-9.9	21.5	3	1	1	3	2	3	2	2	3	2	3	2	3	2	3	1	4
06/09/75	DI	22:58	1	X	-9999.	-9.9	27.0	1	1	2	1	3	1	3	0	4	0	4	0	4	0	4	0	4
06/09/75	IN	23:59	1	X	-9999.	-9.9	21.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	DI	00:04	1	X	-9999.	-9.9	26.0	3	0	0	3	0	3	0	2	1	2	1	2	1	2	1	1	2
06/10/75	IN	01:00	1	X	-9999.	-9.9	21.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/10/75	DI	01:07	1	X	-9999.	-9.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/75	IN	02:14	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	02:21	1	X	-9999.	-9.9	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/75	IN	03:38	1	X	-9999.	-9.9	21.0	4	0	0	4	0	3	1	2	2	2	2	2	2	1	3	1	3
06/10/75	DI	03:52	1	X	-9999.	-9.9	25.0	4	0	1	4	1	3	2	2	3	2	3	1	4	1	4	1	4
06/10/75	IN	04:57	1	X	-9999.	-9.9	21.0	2	1	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/10/75	DI	05:01	1	X	-9999.	-9.9	25.0	2	0	1	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/10/75	IN	08:54	1	X	-9999.	-9.9	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	06:02	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	21:30	1	X	-9999.	-9.9	22.0	5	0	0	5	0	3	2	3	2	3	2	3	2	0	5	0	5
06/10/75	DI	21:42	1	X	-9999.	-9.9	28.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	IN	22:45	1	X	-9999.	-9.9	22.0	4	1	2	4	3	4	3	3	4	3	4	3	4	3	4	2	5
06/10/75	DI	22:48	1	X	-9999.	-9.9	26.5	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	IN	23:50	1	X	-9999.	-9.9	22.0	3	0	0	3	0	3	0	3	0	3	0	3	0	2	1	2	1
06/10/75	DI	23:52	1	X	-9999.	-9.9	26.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	0	3
06/11/75	IN	02:50	1	X	-9999.	-9.9	22.0	2	1	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	00:46	1	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	01:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:52	1	X	-9999.	-9.9	28.5	2	1	0	2	1	2	1	2	1	0	3	0	3	0	3	0	3
06/11/75	IN	03:45	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	03:48	1	X	-9999.	-9.9	25.5	1	1	0	1	1	1	1	1	1	1	1	1	1	0	2	0	2
06/11/75	IN	05:44	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/11/75	DI	05:46	1	X	-9999.	-9.9	28.5	1	1	2	2	2	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	IN	08:43	1	X	-9999.	-9.9	22.0	2	1	2	2	3	2	3	2	3	2	3	2	3	2	3	2	3
06/11/75	DI	08:47	1	X	-9999.	-9.9	25.0	3	2	3	4	4	4	4	4	4	4	4	2	6	1	7	0	8
06/11/75	IN	09:57	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	09:56	1	X	-9999.	-9.9	26.0	3	6	1	4	6	4	6	3	7	2	8	1	9	0	10	0	10
06/11/75	IN	21:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	21:34	1	X	-9999.	-9.9	28.0	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/11/75	IN	22:30	1	X	-9999.	-9.9	22.0	1	2	0	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/11/75	DI	22:33	1	X	-9999.	-9.9	29.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	23:32	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/11/75	DI	23:36	1	X	-9999.	-9.9	28.0	2	0	0	2	0	2	0	2	0	2	0	1	1	1	1	1	1
06/12/75	IN	00:31	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	1	X	-9999.	-9.9	26.5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/12/75	IN	01:28	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	01:47	1	X	-9999.	-9.9	26.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
05/12/75	IN	02:43	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	02:46	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	03:37	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
05/12/75	DI	03:42	1	X	-9999.	-9.9	26.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/12/75	IN	04:35	1	X	-9999.	-9.9	22.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
05/12/75	DI	04:40	1	X	-9999.	-9.9	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
05/12/75	IN	05:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	05:38	1	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/12/75	IN	21:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	21:40	1	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/12/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	22:34	1	X	-9999.	-9.9	28.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
05/12/75	IN	23:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	23:18	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	00:10	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	00:19	1	X	-9999.	-9.9	26.0	0	2	0	1	1	1	1	1	1	1	1	0	2	0	2	0	2
05/13/75	IN	01:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	01:18	1	X	-9999.	-9.9	24.0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	2	0	2
05/13/75	IN	02:14	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
05/13/75	DI	02:18	1	X	-9999.	-9.9	30.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/13/75	IN	03:10	1	X	-9999.	-9.9	21.5	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
05/13/75	DI	03:20	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	04:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	04:26	1	X	-9999.	-9.9	25.5	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
05/13/75	IN	05:21	1	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
05/13/75	DI	05:26	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	21:44	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	21:56	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	22:53	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	22:56	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/16/73	IN	23:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/73	DI	23:55	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	00:42	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	00:47	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	01:36	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	01:44	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	02:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	02:36	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	03:28	1	X	-9999	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	03:43	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	04:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	04:35	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	05:22	1	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/17/73	DI	05:25	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	21:37	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	21:36	1	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	22:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	22:38	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	IN	23:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/73	DI	23:18	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	00:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	00:17	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	01:09	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	01:11	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	01:59	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	02:03	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	02:59	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	03:00	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	03:49	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	03:50	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	IN	04:39	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/73	DI	04:40	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
6/18/75	IN	00:23	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/75	DI	03:25	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/75	IN	06:15	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/75	DI	08:10	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/75	IN	21:20	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/18/75	DI	23:38	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/19/75	IN	20:31	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/20/75	DI	11:30	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/21/75	IN	23:26	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/23/75	DI	23:31	1	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
6/24/75	IN	00:20	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24/75	DI	00:22	1	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24/75	IN	01:07	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/25/75	DI	01:13	1	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/26/75	IN	11:56	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/27/75	DI	01:58	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/28/75	IN	02:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/28/75	DI	02:57	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/29/75	IN	03:48	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/29/75	DI	04:02	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/30/75	IN	04:54	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/30/75	DI	05:00	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/1/75	IN	05:45	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/1/75	DI	06:54	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/1/75	IN	21:11	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/75	DI	21:28	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/75	IN	22:20	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/3/75	DI	22:30	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/4/75	IN	23:09	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/4/75	DI	23:03	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/5/75	IN	23:38	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/5/75	DI	23:54	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/31/75	IN	02:45	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	03:02	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	04:30	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	05:20	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	05:24	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	20:38	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	21:42	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	21:57	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	22:26	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	22:14	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/31/75	DI	22:14	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	IN	23:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/31/75	DI	23:00	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/01/75	IN	23:48	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/00/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:30	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:16	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:06	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	02:14	2	X	-9999	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:57	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:42	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:50	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:26	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:30	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:03	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:01	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:57	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= % OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - Y=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	06:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	08:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	10:05	2	X	-9999.	-9.9	24.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	10:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:17	2	X	-9999.	-9.9	32.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	22:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:31	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:18	2	X	-9999	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:00	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:44	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:43	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:40	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:23	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:22	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:23	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:04	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:35	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:49	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:55	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:41	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/75	IN	22:40	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	22:34	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:35	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	0:31	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:18	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:04	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:02	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:51	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:38	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:33	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:21	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	03:22	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	04:18	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:15	2	X	-9999.	-9.9	31.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:23	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:15	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:09	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:07	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:52	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:51	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	20:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	20:45	2	X	-9999.	-9.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/11/75	IN	22:06	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	22:05	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	23:05	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	23:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	23:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	23:55	2	X	-9999.	-9.9	31.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/75	IN	00:44	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/75	DI	00:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/08/75	IN	21:50	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	21:40	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	23:27	2	X	-9999.	-9.9	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/09/75	DI	23:20	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	00:33	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	02:00	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	03:05	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	02:10	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	04:25	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	04:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	05:05	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	05:31	2	X	-9999.	-9.9	25.3	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
05/10/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	21:23	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	22:46	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	22:45	2	X	-9999.	-9.9	28.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	00:15	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/31/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	01:31	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/31/75	DI	01:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/31/75	DI	03:20	2	X	-9999.	-9.9	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	IN	05:14	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/30/75	DI	05:17	2	X	-9999.	-9.9	26.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/75	DI	22:00	2	X	-9999.	-9.9	26.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	IN	23:18	2	Y	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/75	DI	23:32	2	X	-9999.	-9.9	25.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/04/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/03/78	IN	02:13	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	02:12	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	03:13	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	03:27	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	04:37	2	X	-9999.	-9.9	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	04:49	2	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/03/78	IN	05:49	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	05:48	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
11/03/77	IN	21:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/03/77	DI	21:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/03/78	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/03/78	DI	23:06	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/03/78	IN	23:36	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/04/78	DI	00:05	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	01:20	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	12:06	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	12:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	13:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	13:43	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	14:43	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	14:58	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	15:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	15:39	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	21:21	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	21:33	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	22:40	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	22:42	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/78	IN	23:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/03/78	DI	23:47	2	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/78	IN	00:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/78	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P- # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VISIBILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/07/75	IN	01:57	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/07/75	DI	02:01	2	X	-9999.	-9.9	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/08/75	IN	03:15	2	X	-9999.	-9.9	21.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
04/08/75	DI	03:03	2	X	-9999.	-9.9	24.0	2	0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/08/75	IN	04:20	2	X	-9999.	-9.9	21.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/08/75	DI	04:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/09/75	IN	05:20	2	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/09/75	DI	05:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/09/75	IN	21:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/09/75	DI	21:46	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/10/75	IN	22:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/10/75	DI	22:56	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	IN	23:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	DI	23:41	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/12/75	IN	01:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/12/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/12/75	IN	02:07	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/12/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/75	IN	03:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/75	DI	03:07	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/75	IN	04:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/75	DI	04:17	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	IN	22:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	DI	21:50	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/75	IN	23:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/75	DI	22:58	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/16/75	IN	23:59	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/16/75	DI	00:04	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	IN	01:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	DI	01:07	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	IN	02:14	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	02:21	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VISIBILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS: INITIAL A	INITIAL S	INITIAL D	3 HRS A	3 HRS D	6 HRS A	6 HRS D	12 HRS A	12 HRS D	24 HRS A	24 HRS D	48 HRS A	48 HRS D	72 HRS A	72 HRS D	96 HRS A	96 HRS D
06/10/75	IN	03:38	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	03:32	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:57	1	X	-9999.	-9.9	21.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/10/75	DI	05:01	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	05:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	06:02	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	21:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:45	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:48	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	23:30	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	23:32	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	00:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:46	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:52	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:52	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	02:48	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	02:48	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	03:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	03:48	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	04:43	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	04:49	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	05:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:56	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	21:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	21:39	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:28	1	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	23:32	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	23:26	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	00:31	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/16/75	IN	20:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	20:55	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:41	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:47	1	X	-9999.	-9.9	28.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
05/17/75	IN	01:56	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	01:04	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	02:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	02:36	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	03:38	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	03:43	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	04:33	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	04:38	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	05:32	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	05:38	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	21:37	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	21:36	1	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	22:39	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	22:33	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	23:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	23:18	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	00:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	00:17	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	01:09	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	01:11	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	01:59	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	02:03	1	Y	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	02:59	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	03:00	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	03:49	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	03:50	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	IN	04:39	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	04:40	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/13/78	IN	09:43	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	09:39	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	01:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	01:32	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	05:21	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	05:25	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	09:06	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	09:10	2	X	-9999.	-9.9	21.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
04/13/78	IN	21:37	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	21:41	2	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	01:36	2	Y	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	01:41	2	Y	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	05:12	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	05:16	2	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	09:37	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	09:03	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	09:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	09:43	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	01:50	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	01:56	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	05:03	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	05:09	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	09:41	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	09:51	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	09:51	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	DI	09:54	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	IN	01:19	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	DI	01:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	IN	05:28	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	DI	05:40	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	IN	06:04	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/21/78	DI	06:08	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P = # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

TREATMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/27/75	IN	21:36	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/27/75	DI	21:29	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/28/75	IN	22:09	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/28/75	DI	22:11	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/29/75	IN	22:52	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/29/75	DI	23:01	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/30/75	IN	23:32	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/30/75	DI	23:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/01/75	IN	00:21	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/01/75	DI	00:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/02/75	IN	01:02	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/02/75	DI	01:01	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/75	IN	01:42	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/75	DI	01:38	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/04/75	IN	02:34	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/04/75	DI	02:38	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/05/75	IN	03:13	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/05/75	DI	03:10	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	IN	03:54	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	DI	03:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	IN	04:38	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	DI	04:34	2	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
05/08/75	IN	05:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	05:18	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	06:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	06:06	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	21:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	21:37	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	22:32	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	22:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	23:14	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING, M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/75	IN	00:10	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	00:11	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	00:59	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:48	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:39	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:32	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:34	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:18	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	03:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	04:02	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:09	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	04:51	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:51	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	05:40	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:43	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	06:31	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:36	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:20	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:20	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:10	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:07	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:50	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:58	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:30	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:35	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:22	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:29	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:10	2	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	02:18	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:00	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:02	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST= STATION; DI=DISCHARGE; IN= INTAKE

TRASHCUT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	03:45	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	02:52	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:30	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	06:20	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	06:22	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	20:13	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	21:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	11:17	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	21:16	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/75	IN	08:16	3	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/75	DI	22:14	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:00	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:08	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:46	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:20	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:16	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:04	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	02:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:57	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:42	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:50	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:26	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:30	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:03	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:57	2	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	06:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING, M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UM-0)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/73	IN	04:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/73	DI	06:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/73	IN	21:30	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/73	DI	23:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/73	IN	21:20	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/73	DI	21:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/73	IN	12:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/73	DI	12:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/73	IN	23:31	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/73	DI	23:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/73	IN	07:15	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/73	DI	09:18	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/73	IN	01:03	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/73	DI	01:00	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/73	IN	01:46	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/73	DI	01:49	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/73	IN	02:49	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/73	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/73	IN	03:38	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/73	DI	03:36	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/73	IN	04:10	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/73	DI	04:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/73	IN	05:31	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/73	DI	05:05	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/73	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/73	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/73	IN	06:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/73	DI	06:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/73	IN	20:09	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/73	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/73	IN	21:50	2	X	-9999.	-9.9	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/07/73	DI	21:41	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/75	IN	22:40	2	Y	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	22:34	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	23:30	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	23:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	00:21	2	X	-9999.	-9.9	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/09/75	DI	00:18	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	01:06	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	01:11	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	01:51	2	X	-9999.	-9.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/10/75	DI	01:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	02:38	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	02:36	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	03:31	2	X	-9999.	-9.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/10/75	DI	03:32	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	04:18	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	04:15	2	X	-9999.	-9.9	31.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	05:23	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	05:15	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	06:09	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	06:07	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	06:52	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	06:51	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	20:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	21:06	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	22:03	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/75	IN	22:03	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/75	DI	23:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/75	IN	23:58	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/75	DI	23:56	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:44	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	00:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(P=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/18/75	IN	01:37	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	DI	01:42	2	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	IN	02:34	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	DI	02:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	IN	03:28	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	DI	03:33	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	IN	04:34	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	DI	04:40	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	IN	05:13	2	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/18/75	DI	05:18	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	IN	06:03	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/18/75	DI	06:58	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	14:40	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	14:58	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	15:50	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	15:52	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	16:13	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	16:18	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	16:38	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	17:00	2	X	-9999.	-9.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	17:30	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	17:45	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	18:22	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	18:27	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	19:09	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	19:20	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	19:53	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	19:51	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	20:31	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	20:30	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	21:10	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	21:05	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	01:37	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:42	2	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:34	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:33	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:20	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	07:34	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	07:10	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	09:15	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	09:18	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	11:03	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:58	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:41	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	12:33	2	X	-9999.	-9.9	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	13:36	2	X	-9999.	-9.9	27.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	13:31	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	15:13	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	15:15	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:39	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:00	2	X	-9999.	-9.9	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	17:30	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:45	2	X	-9999.	-9.9	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	19:22	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:27	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:00	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:00	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:50	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:51	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	20:31	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:30	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	21:10	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:05	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/72	IN	04:28	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	04:26	2	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	05:12	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	05:11	2	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	05:51	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	06:07	2	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	06:45	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	06:50	2	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	07:20	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	07:33	2	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/28/72	IN	08:10	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	08:06	2	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	08:47	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	09:30	2	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	09:26	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	09:27	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	10:00	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	10:04	2	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	10:43	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	10:55	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	11:20	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	11:48	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	11:42	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	12:38	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	12:50	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	13:28	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	13:15	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	17:06	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	DI	17:11	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	17:45	2	X	-9999.	-9.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/28/72	DI	18:00	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/72	IN	18:30	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UNMO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/04/78	DI	14:40	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	IN	15:30	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	DI	15:26	2	X	-9999.	-9.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	IN	16:07	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	DI	16:00	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	IN	16:46	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	DI	16:50	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	IN	17:26	2	X	100.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/78	DI	17:36	1	X	170.	-8.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/78	IN	18:03	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/78	DI	18:13	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/78	IN	18:52	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/78	DI	19:03	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/78	IN	19:38	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/78	DI	19:48	2	X	-9999.	-8.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/78	IN	20:25	2	X	-9999.	-8.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/78	DI	20:28	2	X	-9999.	-8.9	37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/78	IN	20:55	2	X	-9999.	-8.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/07/78	DI	21:07	2	X	-9999.	-8.9	37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/78	IN	01:39	1	X	-9999.	7.0	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/78	DI	01:20	1	X	-9999.	7.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/78	IN	03:30	1	X	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/78	DI	03:45	1	X	-9999.	5.0	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/78	IN	05:25	1	X	-9999.	4.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/78	DI	06:04	1	X	-9999.	4.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/78	IN	07:15	1	X	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/78	DI	07:15	1	X	-9999.	5.0	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/78	IN	08:04	1	X	-9999.	7.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/78	DI	08:05	1	X	-9999.	7.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/78	IN	09:41	1	X	-9999.	8.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/78	DI	09:52	1	X	-9999.	8.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/78	IN	09:27	1	X	-9999.	10.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P=# OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	DI	09:30	1	X	-9999.	10.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	10:06	1	X	-9999.	13.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:09	1	X	-9999.	13.0	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	10:34	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:01	1	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	14:46	1	X	-9999.	15.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	14:50	1	X	-9999.	15.0	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
[illegible]	IN	15:32	1	X	-9999.	15.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	15:32	1	X	-9999.	15.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:20	1	X	-9999.	15.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:25	1	X	-9999.	15.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	17:02	1	X	-9999.	14.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:10	1	X	-9999.	14.0	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
[illegible]	IN	18:11	1	X	-9999.	13.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	18:12	1	X	-9999.	13.0	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	3
[illegible]	IN	19:50	1	X	-9999.	10.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:55	1	X	-9999.	10.0	33.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
[illegible]	IN	19:36	1	X	-9999.	8.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:35	1	X	-9999.	8.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	20:15	1	X	-9999.	7.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:22	1	X	-9999.	7.5	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
[illegible]	IN	21:01	1	X	-9999.	6.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:08	1	X	-9999.	6.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	22:00	1	X	-9999.	9.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	22:10	1	X	-9999.	9.0	21.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
[illegible]	IN	00:58	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:45	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	06:31	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:32	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	07:33	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	07:20	1	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	08:20	1	X	-9999.	6.5	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/13/78	DI	08:20	1	X	-9999.	4.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	09:05	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	09:05	1	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	09:51	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	10:00	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	10:40	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	10:43	1	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
04/13/78	IN	17:15	1	X	-9999.	4.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	17:05	1	X	-9999.	4.5	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
04/13/78	IN	17:38	1	X	-9999.	6.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	18:00	1	X	-9999.	6.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	18:40	1	X	-9999.	9.0	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
04/13/78	DI	18:40	1	X	-9999.	9.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	IN	19:28	1	X	-9999.	10.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/13/78	DI	19:22	1	X	-9999.	10.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	20:13	1	X	-9999.	9.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	20:13	1	X	-9999.	9.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	21:13	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	21:15	1	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	22:10	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	22:00	1	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	IN	22:50	1	X	-9999.	9.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/78	DI	22:50	1	X	-9999.	9.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	IN	16:40	1	X	-9999.	4.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
04/15/78	DI	16:30	1	X	-9999.	4.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	IN	17:33	1	X	-9999.	3.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	DI	17:30	1	X	-9999.	3.6	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	IN	18:18	1	X	-9999.	4.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	DI	18:18	1	X	-9999.	4.5	34.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
04/15/78	IN	19:54	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/15/78	DI	19:50	1	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/16/78	IN	19:31	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P=# OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (MMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	DI	12:28	1	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	20:10	1	X	-9999.	10.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:10	1	X	-9999.	10.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	21:10	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:12	1	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:05	1	X	-9999.	14.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	22:00	1	X	-9999.	14.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:01	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:00	1	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:55	1	X	-9999.	10.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:56	1	X	-9999.	10.5	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	17:40	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:32	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	18:30	1	X	-9999.	8.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	18:30	1	X	-9999.	8.0	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:10	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	18:50	1	X	-9999.	-9.9	30.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	21:05	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:10	1	X	-9999.	-9.9	30.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	21:00	1	X	-9999.	7.0	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	21:05	1	X	-9999.	7.0	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	21:51	1	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:57	1	X	-9999.	2.0	30.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	22:05	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:10	1	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	16:33	1	X	-9999.	8.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:28	1	X	-9999.	8.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	17:21	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:22	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	18:11	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	18:14	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:04	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= % OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-DAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	12:40	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:23	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:30	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	10:21	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:10	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:01	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:02	2	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
[illegible]	IN	01:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:01	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:30	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:34	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:11	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:22	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	10:18	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:12	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:08	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:10	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:00	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:07	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	11:08	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:11	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	11:01	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	12:10	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:04	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	12:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	09:00	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	09:58	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:09	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	01:44	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	09:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE, S=STUNNED, D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-JUV ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	DI	14:40	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	10:50	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	13:16	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:07	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:00	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:46	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:05	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	17.26	2	X	150.	-9.9	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17.26	2	X	170.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16.03	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:18	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	15:52	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	15:03	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:38	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:49	2	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	20:32	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:28	2	X	-9999.	-9.9	37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	20:09	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	2.:07	2	X	-9999.	-9.9	37.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:09	1	X	-9999.	7.0	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	04:52	1	X	-9999.	7.0	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	05:50	1	Y	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:05	1	X	-9999.	5.0	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	06:23	1	X	-9999.	4.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	0.:34	1	X	-9999.	4.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	07:15	1	X	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	07:16	1	X	-9999.	5.0	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	08:06	1	Y	-9999.	7.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	08:05	1	X	-9999.	7.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	09:41	1	X	-9999.	8.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	09.42	1	X	-9999.	8.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	09.27	1	X	-9999.	10.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-BAY PROHOUY- CJV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	DI	05:10	1	X	-9999.	10.0	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	10:06	1	X	-9999.	18.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:04	1	X	-9999.	13.0	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	10:54	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	11:01	1	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	17:56	1	X	-9999.	10.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	14:48	1	X	-9999.	10.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	10:32	1	X	-9999.	10.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:32	1	X	-9999.	13.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	10:30	1	X	-9999.	15.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	14:20	1	X	-9999.	13.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	17:08	1	X	-9999.	14.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:15	1	X	-9999.	14.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	10:11	1	X	-9999.	13.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	10:12	1	X	-9999.	13.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	12:00	1	X	-9999.	14.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	12:00	1	X	-9999.	14.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	17:34	1	X	-9999.	8.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:30	1	X	-9999.	8.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	20:15	1	X	-9999.	7.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:32	1	X	-9999.	7.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	21:01	1	X	-9999.	6.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:08	1	X	-9999.	6.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	02:00	1	X	-9999.	2.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:40	1	X	-9999.	0.0	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	06:38	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:40	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	04:31	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:32	1	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	II	07:30	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	07:32	1	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	II	08:20	1	X	-9999.	6.5	[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=[illegible] OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION DI=DISCHARGE; II=INTAKE

...TMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	F	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	[illegible]	21:00	2	X	-[illegible]	-9.9	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	21:40	2	X	-[illegible]	-9.9	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	23:27	2	X	-[illegible]	-9.9	20.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	01:20	2	X	-[illegible]	-9.9	22.0	1	2	4	3	4	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	04:01	2	X	-[illegible]	-9.9	20.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	05:35	2	X	-[illegible]	-9.9	20.5	0	3	12	0	15	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	[illegible]	22:00	2	X	-[illegible]	-9.9	19.5	3	0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	02:01	2	X	-[illegible]	-9.9	20.5	0	3	6	0	9	0	9	0	9	0	9	0	9	0	9	0	9
[illegible]	[illegible]	03:05	2	X	-[illegible]	-9.9	19.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	04:10	2	X	-[illegible]	-9.9	20.5	2	0	2	2	2	1	3	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	20:[illegible]	2	X	-[illegible]	-9.9	19.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	[illegible]	2	X	-[illegible]	-9.9	20.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	00:20	2	X	-[illegible]	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	01:01	2	X	-[illegible]	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	21:47	2	X	-[illegible]	-9.9	21.0	1	2	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	21:52	2	X	-[illegible]	-9.9	20.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
[illegible]	[illegible]	22:06	2	X	-[illegible]	-9.9	21.0	2	2	1	1	4	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	22:40	2	X	-[illegible]	-9.9	20.8	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	23:10	2	X	-[illegible]	-9.9	20.0	1	1	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	00:20	2	X	-[illegible]	-9.9	20.5	0	2	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	[illegible]	01:41	2	X	-[illegible]	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	01:[illegible]	2	X	-[illegible]	-9.9	20.5	2	1	5	1	7	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	[illegible]	03:20	2	X	-[illegible]	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	05:20	2	X	-[illegible]	-9.9	20.8	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	00:11	2	X	-[illegible]	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	17:17	2	X	-[illegible]	-9.9	20.7	0	1	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	21:42	2	X	-[illegible]	-9.9	22.0	2	2	0	4	0	4	0	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	22:01	2	X	-[illegible]	-9.9	20.0	1	0	2	1	2	1	2	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	23:10	2	X	-[illegible]	-9.9	21.0	0	3	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	18:08	2	X	-[illegible]	-9.9	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	00:14	2	X	-[illegible]	-9.9	21.2	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	00:53	2	X	-[illegible]	-9.9	20.0	1	0	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8

VIABILITY- A=ACTIVE, S=STUNNED, D=DEAD

PUMP STATUS- #= # OF PUMPS OPERATING, M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION, DI=DISCHARGE, IN=INTAKE

[illegible] MOBILITY-ELUTRIATE- LARVAE

DATE	ST	TIME	P	M	COND. (mmhos)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	[illegible]	12:12	2	X	-9999.	-9.9	21.0	2	2	1	1	4	1	4	1	4	0	5	0	5	0	5	0	5
[illegible]	[illegible]	11:11	2	X	-9999.	-9.9	25.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	[illegible]	11:13	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:27	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:31	2	X	-9999.	-9.9	20.8	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	11:38	2	X	-9999.	-9.9	23.0	1	2	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	11:04	2	X	-9999.	-9.9	21.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	11:10	2	X	-9999.	-9.9	23.0	1	0	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	11:03	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:41	2	X	-9999.	-9.9	24.0	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	12:07	1	X	-9999.	-9.9	21.4	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	10:11	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:28	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	11:03	2	X	-9999.	-9.9	26.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	11:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:30	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	10:40	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:51	2	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	11:31	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:55	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	11:40	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	08:20	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	08:10	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	08:10	2	X	-9999.	-9.9	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	11:31	2	X	-9999.	-9.9	21.0	1	2	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	11:13	2	X	-9999.	-9.9	26.0	0	6	16	0	22	0	22	0	22	0	22	0	22	0	22	0	22
[illegible]	[illegible]	11:00	2	X	-9999.	-9.9	21.0	11	10	1	0	22	0	22	0	22	0	22	0	22	0	22	0	22
[illegible]	[illegible]	11:22	2	X	-9999.	-9.9	24.0	1	10	17	8	20	0	28	0	28	0	28	0	28	0	28	0	28
[illegible]	[illegible]	11:39	2	X	-9999.	-9.9	21.5	2	2	2	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	11:09	2	X	-9999.	-9.9	24.0	2	0	7	2	7	0	9	0	9	0	9	0	9	0	9	0	9
[illegible]	[illegible]	08:40	2	X	-9999.	-9.9	21.0	2	3	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	08:30	2	X	-9999.	-9.9	20.0	1	2	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7

MOBILITY- A=ALIVE; S=STUNNED; [illegible] D

PUMP STATUS- P=[illegible] OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DT=DISCHARGE; IN=INLET

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (mmhos)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/07/77	IN	01:57	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/77	DI	02:01	2	X	-9999.	-9.9	23.0	0	1	4	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
05/07/77	IN	03:13	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/07/77	DI	04:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/77	IN	04:18	1	X	-9999.	-9.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/07/77	DI	04:22	2	X	-9999.	-9.9	24.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
05/07/77	IN	05:20	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/07/77	DI	05:25	2	X	-9999.	-9.9	24.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
05/07/77	IN	06:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/77	DI	21:16	2	X	-9999.	-9.9	23.0	1	4	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
05/07/77	IN	22:20	2	X	-9999.	-9.9	21.0	4	2	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
05/07/77	DI	23:11	2	X	-9999.	-9.9	26.0	0	8	4	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
05/08/77	IN	00:17	2	X	-9999.	-9.9	21.0	4	3	3	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
05/08/77	DI	19:41	2	X	-9999.	-9.9	23.0	0	3	5	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
05/08/77	IN	01:05	2	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/08/77	DI	02:30	2	X	-9999.	-9.9	25.0	2	0	5	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
05/08/77	IN	03:47	2	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/08/77	DI	04:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/77	IN	04:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/77	DI	05:07	2	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/08/77	IN	21:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/77	DI	22:17	2	X	-9999.	-9.9	25.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
05/08/77	IN	23:50	2	X	-9999.	-9.9	21.5	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
05/09/77	DI	21:36	1	X	-9999.	-9.9	28.0	0	2	12	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14
05/09/77	IN	22:01	1	X	-9999.	-9.9	21.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/09/77	DI	23:58	1	X	-9999.	-9.9	27.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
05/10/77	IN	00:59	1	X	-9999.	-9.9	21.0	0	4	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
05/10/77	DI	02:08	1	X	-9999.	-9.9	26.0	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
05/10/77	IN	01:00	1	X	-9999.	-9.9	21.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/10/77	DI	01:07	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/77	IN	02:14	1	X	-9999.	-9.9	21.0	7	5	1	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
05/10/77	DI	02:21	1	X	-9999.	-9.9	23.0	2	15	5	0	22	0	22	0	22	0	22	0	22	0	22	0	22	0	22

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- LARVAE

[illegible]	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	04:38	1	X	-9999.	-9.9	21.0	1	4	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	DI	03:33	1	X	-9999.	-9.9	23.0	0	3	15	3	15	0	18	0	18	0	18	0	18	0	18	0	18
[illegible]	IN	04:37	1	X	-9999.	-9.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	05:01	1	X	-9999.	-9.9	25.0	6	2	3	3	8	1	10	1	10	0	11	0	11	0	11	0	11
[illegible]	IN	05:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:02	1	X	-9999.	-9.9	24.0	1	2	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	IN	01:19	1	X	-9999.	-9.9	22.0	1	8	6	1	14	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
[illegible]	IN	22:40	1	X	-9999.	-9.9	22.0	2	7	4	2	11	0	13	0	13	0	13	0	13	0	13	0	13
[illegible]	DI	22:48	1	X	-9999.	-9.9	26.5	0	7	8	0	15	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	IN	03:50	1	X	-9999.	-9.9	22.0	1	4	2	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	DI	04:52	1	X	-9999.	-9.9	24.0	1	5	10	0	16	0	16	0	16	0	16	0	16	0	16	0	16
[illegible]	IN	05:50	1	X	-9999.	-9.9	22.0	1	4	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	DI	00:48	1	X	-9999.	-9.9	24.0	0	3	9	0	12	0	12	0	12	0	12	0	12	0	12	0	12
[illegible]	IN	01:52	1	X	-9999.	-9.9	22.0	0	4	2	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	DI	04:52	1	X	-9999.	-9.9	26.5	0	4	3	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	IN	02:49	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	00:49	1	X	-9999.	-9.9	25.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	03:46	1	X	-9999.	-9.9	22.0	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	03:49	1	X	-9999.	-9.9	23.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	01:18	1	X	-9999.	-9.9	22.0	0	3	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	DI	04:59	1	X	-9999.	-9.9	24.0	6	8	14	0	23	0	23	0	23	0	23	0	23	0	23	0	23
[illegible]	IN	20:57	1	X	-9999.	-9.9	22.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	DI	23:03	1	X	-9999.	-9.9	26.0	4	6	8	0	18	0	18	0	18	0	18	0	18	0	18	0	18
[illegible]	IN	21:30	1	X	-9999.	-9.9	22.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	22:39	1	X	-9999.	-9.9	28.0	0	2	10	0	12	0	12	0	12	0	12	0	12	0	12	0	12
[illegible]	IN	02:30	1	X	-9999.	-9.9	22.0	0	4	4	0	8	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	DI	23:23	1	X	-9999.	-9.9	29.0	0	1	14	0	15	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	IN	23:22	1	X	-9999.	-9.9	22.0	1	1	6	0	8	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	DI	23:26	1	X	-9999.	-9.9	28.0	0	4	9	0	13	0	13	0	13	0	13	0	13	0	13	0	13
[illegible]	IN	00:31	1	X	-9999.	-9.9	22.0	1	0	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	DI	00:27	1	X	-9999.	-9.9	26.5	0	3	7	0	10	0	10	0	10	0	10	0	10	0	10	0	10

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (U MHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/79	IN	01:28	1	X	-9999.	-9.9	22.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/79	DI	01:47	1	X	-9999.	-9.9	26.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/12/79	IN	02:43	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/79	DI	02:46	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/79	IN	03:37	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/79	DI	03:42	1	X	-9999.	-9.9	26.5	0	2	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/12/79	IN	04:33	1	X	-9999.	-9.9	22.0	1	4	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/12/79	DI	04:40	1	X	-9999.	-9.9	26.5	0	3	8	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/12/79	IN	05:46	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/79	DI	05:50	1	X	-9999	-9.9	26.0	0	1	10	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/13/79	IN	21:37	1	X	-9999.	-9.9	22.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/79	DI	21:45	1	X	-9999.	-9.9	26.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/14/79	IN	12:50	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/79	DI	13:30	1	X	-9999.	-9.9	26.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/14/79	IN	23:19	1	X	-9999.	-9.9	22.0	1	1	3	1	4	0	5	0	5	0	5	0	5	0	5	0	5
06/15/79	DI	23:15	1	X	-9999.	-9.9	26.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/15/79	IN	07:17	1	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/79	DI	00:18	1	X	-9999.	-9.9	26.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/79	IN	01:14	1	X	-9999.	-9.9	22.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/79	DI	01:18	1	X	-9999.	-9.9	26.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/79	IN	02:14	1	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/79	DI	02:18	1	X	-9999.	-9.9	26.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/17/79	IN	04:10	1	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/79	DI	05:20	1	X	-9999.	-9.9	25.5	0	3	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/17/79	IN	04:12	1	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/79	DI	06:26	1	X	-9999.	-9.9	26.5	0	1	8	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/18/79	IN	00:21	1	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/79	DI	05:26	1	X	-9999.	-9.9	27.0	1	4	9	0	14	0	14	0	14	0	14	0	14	0	14	0	14
06/19/79	IN	21:48	1	X	-9999.	-9.9	22.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/19/79	DI	21:54	1	X	-9999.	-9.9	26.0	0	1	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/20/79	IN	22:53	1	X	-9999.	-9.9	23.0	4	5	6	0	15	0	15	0	15	0	15	0	15	0	15	0	15
06/16/79	DI	22:56	1	X	-9999.	-9.9	28.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] MOBILITY-GLUTEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	[illegible]	23:54	1	X	-9999.	-9.9	21.5	4	3	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	20:50	1	X	-9999.	-9.9	27.0	0	3	12	0	15	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	[illegible]	00:45	1	X	-9999.	-9.9	21.5	2	3	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	00:47	1	X	-9999.	-9.9	25.0	0	1	11	1	11	1	11	0	12	0	12	0	12	0	12	0	12
[illegible]	[illegible]	01:34	1	X	-9999.	-9.9	21.5	2	4	4	0	10	0	10	0	10	0	10	0	10	0	10	0	10
[illegible]	[illegible]	01:37	1	X	-9999.	-9.9	25.0	0	3	9	0	12	0	12	0	12	0	12	0	12	0	12	0	12
[illegible]	[illegible]	02:38	1	X	-9946.	-9.9	21.0	0	4	4	0	8	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	[illegible]	12:36	1	X	-9999.	-9.9	25.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	13:39	1	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	03:43	1	X	-9999.	-9.9	25.0	1	3	8	0	12	0	12	0	12	0	12	0	12	0	12	0	12
[illegible]	[illegible]	04:33	1	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	05:05	1	X	-9999.	-9.9	23.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	05:13	1	X	-9999.	-9.9	21.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	[illegible]	05:35	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	21:37	1	X	-9999.	-9.9	23.5	0	4	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	22:14	1	X	-9999.	-9.9	25.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	22:39	1	X	-9999.	-9.9	23.0	1	2	2	0	3	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	23:12	1	X	-9999.	-9.9	25.0	0	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15
[illegible]	[illegible]	16:10	1	X	-9999.	-9.9	22.0	0	2	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	[illegible]	17:18	1	X	-9999.	-9.9	31.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
[illegible]	[illegible]	00:12	1	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	01:17	1	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	01:08	1	X	-9999.	-9.9	22.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	04:11	1	X	-9999.	-9.9	30.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	11:19	1	X	-9999.	-9.9	22.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	11:03	1	X	-9999.	-9.9	30.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	[illegible]	01:29	1	X	-9999.	-9.9	21.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	01:00	1	X	-9999.	-9.9	30.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	[illegible]	03:48	1	X	-9999.	-9.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	03:50	1	X	-9999.	-9.9	28.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	[illegible]	04:09	1	X	-9999.	-9.9	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	[illegible]	04:43	1	X	-9999.	-9.9	29.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4

MOBILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P=# OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

SITE CODE: DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	05:20	1	X	-9999.	-9.9	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	05:15	1	X	-9999.	-9.9	30.0	0	1	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8
[illegible]	IN	05:17	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	[illegible]	1	X	-9999.	-9.9	30.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	21:10	1	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	21:35	1	X	-9999.	-9.9	33.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	22:01	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:30	1	X	-9999.	-9.9	28.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	20:15	1	X	-9999.	-9.9	22.5	0	3	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	[illegible]	20:30	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:10	1	X	-9999.	-9.9	22.5	2	1	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	05:11	1	X	-9999.	-9.9	30.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	IN	04:57	1	X	-9999.	-9.9	22.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	DI	11:10	1	X	-9999.	-9.9	31.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	04:55	1	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	04:58	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:05	1	X	-9999.	-9.9	21.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	05:07	1	X	-9999.	-9.9	32.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	05:10	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	04:54	1	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	05:54	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:04	1	X	-9999.	-9.9	31.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	[illegible]	[illegible]	1	X	-9999.	-9.9	24.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	12:50	1	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	11:11	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	11:30	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	[illegible]	[illegible]	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:20	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	22:50	2	X	-9999.	-9.9	30.0	0	3	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	23:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:50	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:30	2	X	-9999.	-9.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=POSITION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	00:48	2	X	-9999.	-9.9	23.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	00:37	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:26	2	X	-9999.	-9.9	22.5	1	3	2	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	IN	01:32	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	02:21	2	X	-9999.	-9.9	23.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	02:20	2	X	-9999.	-9.9	21.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	IN	03:16	2	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	03:10	1	X	-9999.	-9.9	21.0	1	0	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
[illegible]	IN	11:27	2	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	11:41	2	X	-9999.	-9.9	23.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	12:35	2	X	-9999.	-9.9	22.5	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	IN	12:41	2	X	-9999.	-9.9	23.5	0	4	2	0	6	0	6	0	6	0	6	0	6	0	6	0	6
[illegible]	IN	13:15	2	Y	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	13:10	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	13:07	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	04:03	2	Y	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	04:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	04:58	2	X	-9999.	-9.9	24.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	01:20	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:32	2	Y	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	00:58	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	02:00	2	X	-9999	-9.9	24.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	02:41	2	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	02:31	2	X	-9999.	-9.9	24.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	03:11	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:24	2	X	-9999.	-9.9	24.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	00:19	2	X	-9999.	-9.9	23.0	1	2	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	04:34	2	X	-9999.	-9.9	24.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	05:23	2	X	-9999	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:20	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	06:04	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	06:08	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ACTIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(X=FULL - T=THROTTLED - Y=UNKNOWN)

ST (STATION) DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	21:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:25	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:04	2	X	-9999.	-9.9	28.0	0	3	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	23:15	2	X	-9999.	-9.9	28.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	22:52	2	X	-9.99.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	22:52	2	X	-9999.	-9.9	28.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	23:32	2	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	23:26	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	00:21	2	X	-9999.	-9.9	28.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:16	2	X	-9999.	-9.9	28.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	01:02	2	X	-9999.	-9.9	28.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:01	2	X	-9.99.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:40	2	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:09	2	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:30	2	X	-9.99.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	02:16	2	X	-9.99.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	02:12	2	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:54	2	X	-9.99.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:03	2	X	-9999.	-9.9	29.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	04:09	2	X	-9999.	-9.9	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	13:06	2	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	03:47	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	12:18	2	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	04:01	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	13:05	2	X	-9999.	-9.9	28.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	11:41	2	X	-9999.	-9.9	28.0	1	1	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	11:37	2	X	-9999.	-9.9	31.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	22:02	2	X	-9.99.	-9.9	28.0	3	1	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	12:29	2	X	-9999.	-9.9	31.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	IN	23:16	2	X	-9999.	-9.9	28.5	1	3	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P=# OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/77	IN	00:10	2	X	-9999.	-9.9	23.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/26/77	DI	00:11	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/77	IN	01:00	2	X	-9999.	-9.9	24.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/26/77	DI	00:59	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/77	IN	01:18	2	X	-9999.	-9.9	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	DI	01:49	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/77	IN	02:38	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/77	DI	02:34	2	X	-9999.	-9.9	29.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/77	IN	03:18	2	X	-9999.	-9.9	23.5	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/77	DI	03:21	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	IN	04:02	2	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	DI	04:09	2	X	-9999.	-9.9	29.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	IN	04:51	2	X	-9999.	-9.9	23.5	1	3	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/27/77	DI	04:51	2	X	-9999.	-9.9	29.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/27/77	IN	05:30	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/77	DI	05:42	2	X	-9999.	-9.9	29.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/77	IN	21:04	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	DI	21:36	2	X	-9999.	-9.9	31.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/77	IN	22:20	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/77	DI	22:26	2	X	-9999.	-9.9	31.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/28/77	IN	23:10	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/77	DI	23:07	2	X	-9999.	-9.9	30.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/77	IN	23:50	2	X	-9999.	-9.9	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/77	DI	23:53	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/77	IN	00:30	2	X	-9999.	-9.9	23.0	1	3	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/77	DI	00:36	2	X	-9999.	-9.9	29.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/77	IN	01:22	2	X	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/77	DI	01:29	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/77	IN	02:10	2	X	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/77	DI	02:18	2	X	-9999.	-9.9	29.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/28/77	IN	03:00	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/77	DI	03:02	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS: INITIAL A	INITIAL S	INITIAL D	3 HRS A	3 HRS D	6 HRS A	6 HRS D	12 HRS A	12 HRS D	24 HRS A	24 HRS D	48 HRS A	48 HRS D	72 HRS A	72 HRS D	96 HRS A	96 HRS D
[illegible]/27/75	IN	03:45	2	X	-9999.	-9.9	23.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]/27/75	DI	03:52	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]/27/75	IN	04:30	2	X	-9999.	-9.9	23.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:20	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:24	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	20:03	2	X	-9999.	-9.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	21:27	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	21:36	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	22:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	22:14	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:09	2	X	-9999.	-9.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	23:49	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:56	2	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	00:30	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	00:30	2	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	01:16	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	01:20	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	02:06	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	02:14	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	02:57	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:43	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	03:50	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	04:34	2	X	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	04:39	2	X	-9999.	-9.9	29.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	05:08	2	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	05:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/01/75	IN	05:57	2	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	06:00	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

STATION; DI=DISCHARGE; IN=INTAKE

TRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (U.MHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	06:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:35	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:18	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:17	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	23:31	2	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	23:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:13	2	X	-9999.	-9.9	24.0	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/02/75	DI	00:13	2	X	-9999.	-9.9	31.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/75	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:00	2	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	01:44	2	X	-9999.	-9.9	24.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/75	DI	01:48	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	02:40	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	03:33	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:35	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:14	2	X	-9999.	-9.9	24.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/02/75	DI	04:20	2	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	05:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:04	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:35	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:49	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	IN	21:55	2	X	-9999.	-9.9	27.[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:41	2	X	-9999.	-9.9	3[illegible]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/75	IN	22:40	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	22:34	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:35	2	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	DI	23:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:21	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:18	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:04	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:02	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:51	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:38	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:33	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:31	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	DI	03:22	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	04:18	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:15	2	X	-9999.	-9.9	31.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:23	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	DI	05:15	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:09	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:07	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:52	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:51	2	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	20:41	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	20:45	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	22:04	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	22:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	23:03	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	23:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/75	IN	23:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/75	DI	23:50	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/75	IN	00:44	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/75	DI	00:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- YOLK SAC LARV

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/08/75	IN	21:50	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	21:40	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	IN	23:27	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	23:23	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	DI	00:33	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	DI	02:00	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	03:05	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	DI	03:10	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	04:30	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	DI	04:31	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	05:25	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	DI	05:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	21:23	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	22:46	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	22:49	2	X	-9999.	-9.9	28.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	IN	00:15	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	IN	01:21	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	DI	01:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	DI	03:20	2	X	-9999.	-9.9	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	IN	05:14	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/08/75	DI	05:17	2	X	-9999.	-9.9	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/08/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/08/75	DI	22:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/08/75	IN	23:18	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/08/75	DI	23:32	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
10/08/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/08/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- YOLK SAC LARV

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/05/75	IN	02:13	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/05/75	DI	02:12	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	IN	03:18	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	DI	03:27	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	IN	04:37	2	X	-9999.	-9.9	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	DI	04:49	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	IN	05:49	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	DI	05:48	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/08/75	IN	22:06	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	21:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	22:57	2	X	-9999.	-9.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	22:00	2	Y	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	23:36	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	00:08	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	01:27	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	01:20	2	X	-9999.	-9.9	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	IN	02:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	DI	02:42	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/15/75	IN	03:56	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/15/75	DI	03:45	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	05:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	04:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	06:00	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	05:59	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/75	IN	21:31	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/75	DI	21:33	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/21/75	IN	22:40	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/21/75	DI	22:42	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/22/75	IN	23:45	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/23/75	DI	23:49	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/75	IN	00:45	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION, DI=DISCHARGE; IN=INTAKE

T=ASSESSMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS: INITIAL A	INITIAL S	INITIAL D	3 HRS A	3 HRS D	6 HRS A	6 HRS D	12 HRS A	12 HRS D	24 HRS A	24 HRS D	48 HRS A	48 HRS D	72 HRS A	72 HRS D	96 HRS A	96 HRS D
05/01/75	IN	21:30	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/01/75	DI	21:00	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/02/75	IN	23:27	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/02/75	DI	23:25	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/75	IN	00:41	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/75	DI	00:38	2	X	-9999.	-9.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/04/75	IN	02:00	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/04/75	DI	02:00	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/05/75	IN	03:05	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/05/75	DI	03:10	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	IN	04:35	2	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/06/75	DI	04:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	IN	05:25	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/75	DI	05:31	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	IN	21:17	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/75	DI	21:23	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	22:46	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	23:45	2	X	-9999.	-9.9	28.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	00:15	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	00:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	01:31	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	01:28	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	03:24	2	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	03:20	2	X	-9999.	-9.9	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	05:14	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	DI	05:17	2	X	-9999.	-9.9	26.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	IN	21:42	2	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/15/75	DI	22:00	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	22:18	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	23:32	2	X	-9999.	-9.9	25.0	1	0	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2
05/17/75	IN	00:44	2	X	-9999.	-9.9	21.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/75	DI	00:53	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST-STATION; DI=DISCHARGE; IN=INTAKE

[illegible] ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS: INITIAL A	INITIAL S	INITIAL D	3 HRS A	3 HRS D	6 HRS A	6 HRS D	12 HRS A	12 HRS D	24 HRS A	24 HRS D	48 HRS A	48 HRS D	72 HRS A	72 HRS D	96 HRS A	96 HRS D
[illegible]/75	IN	01:57	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	03:15	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	03:05	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	04:25	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	04:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	05:20	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	05:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	21:40	2	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:46	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	22:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	22:46	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	23:50	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	23:41	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	01:05	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	00:50	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	02:07	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	02:01	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/[illegible]/75	IN	03:19	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	03:07	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	04:29	2	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	04:17	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	22:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:50	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	23:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:52	1	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	23:59	1	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]/75	DI	00:04	1	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]/75	IN	01:00	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	01:07	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/10/75	IN	02:14	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/10/75	DI	02:21	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE, IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/75	IN	08:38	1	X	-9999.	-9.9	21.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	08:32	1	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:57	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	05:01	1	X	-9999.	-9.9	25.0	3	0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	IN	03:56	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	06:02	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	21:38	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	21:40	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	26:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:48	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	23:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	23:52	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	00:50	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	00:46	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:52	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:52	1	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	02:48	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	02:46	1	X	-9999.	-9.9	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	03:46	1	X	-9999.	-9.9	22.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	03:48	1	X	-9999.	-9.9	25.5	1	4	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5
06/11/75	IN	04:48	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	04:49	1	X	-9999.	-9.9	25.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	IN	05:57	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:56	1	X	-9999.	-9.9	26.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	IN	06:50	1	X	-9999.	-9.9	22.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	06:49	1	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:28	1	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	23:22	1	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	23:26	1	X	-9999.	-9.9	28.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/12/75	IN	00:31	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	1	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING, M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VISIBILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (U*MHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/10/75	IN	01:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	01:47	1	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/10/75	IN	02:43	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	02:46	1	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	03:37	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	03:42	1	X	-9999.	-9.9	24.5	1	2	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
05/12/75	IN	04:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	04:40	1	X	-9999.	-9.9	25.5	2	3	8	1	12	1	12	0	13	0	13	0	13	0	13	0	13
05/12/75	IN	05:46	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	05:38	1	X	-9999.	-9.9	26.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
05/12/75	IN	21:37	1	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/12/75	DI	21:45	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	22:30	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	22:34	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	23:29	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	23:18	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	00:15	1	X	-9999.	-9.9	22.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	00:18	1	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	01:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:18	1	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	02:14	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	02:18	1	X	-9999	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	03:15	1	X	-9999.	-9.9	21.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	03:20	1	X	-9999.	-9.9	25.5	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/13/75	IN	04:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	04:26	1	X	-9999.	-9.9	25.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	05:21	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	05:26	1	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	21:44	1	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/75	DI	21:56	1	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	22:53	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	22:56	1	X	-9999.	-9.9	28.0	1	1	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VISIBILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/16/75	IN	23:54	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/16/75	DI	23:55	1	X	-9999.	-9.9	27.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	00:42	1	X	-9999.	-9.9	21.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	00:47	1	X	-9999.	-9.9	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	01:34	1	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	01:44	1	X	-9999.	-9.9	25.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/17/75	IN	02:33	1	X	-9999.	-9.9	21.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/17/75	DI	02:36	1	X	-9999.	-9.9	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	03:32	1	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	03:43	1	X	-9999.	-9.9	25.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	04:33	1	X	-9999.	-9.9	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	04:39	1	X	-9999.	-9.9	25.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/17/75	IN	05:22	1	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	05:29	1	X	-9999.	-9.9	25.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	21:37	1	X	-9999.	-9.9	22.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/17/75	DI	21:46	1	X	-9999.	-9.9	32.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/17/75	IN	22:29	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/17/75	DI	22:38	1	X	-9999.	-9.9	32.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/17/75	IN	23:14	1	X	-9999.	-9.9	22.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/17/75	DI	23:19	1	X	-9999.	-9.9	32.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/18/75	IN	00:12	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	00:17	1	X	-9999.	-9.9	31.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/18/75	IN	01:09	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	01:11	1	X	-9999.	-9.9	30.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/18/75	IN	01:52	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	02:03	1	X	-9999.	-9.9	30.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/18/75	IN	02:58	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	03:00	1	X	-9999.	-9.9	30.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
04/18/75	IN	03:49	1	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/18/75	DI	03:50	1	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/18/75	IN	04:39	1	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/18/75	DI	04:40	1	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/75	IN	05:23	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:20	1	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	06:13	1	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	06:10	1	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	21:30	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	21:33	1	X	-9999.	-9.9	33.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	22:31	1	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:30	1	X	-9999.	-9.9	33.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	IN	23:26	1	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:31	1	X	-9999.	-9.9	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	00:20	1	X	-9999.	-9.9	22.0	1	2	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/13/75	DI	00:22	1	X	-9999.	-9.9	33.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	01:07	1	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	DI	01:13	1	X	-9999.	-9.9	34.5	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/13/75	IN	01:56	1	X	-9999.	-9.9	22.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/13/75	DI	01:53	1	X	-9999.	-9.9	33.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/14/75	IN	02:50	1	X	-9999.	-9.9	22.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/15/75	DI	02:57	1	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/75	IN	03:48	1	X	-9999.	-9.9	22.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/15/75	DI	04:02	1	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/75	IN	04:54	1	X	-9999.	-9.9	22.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/15/75	DI	05:00	1	X	-9999.	-9.9	31.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/15/75	IN	06:45	1	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/75	DI	06:50	1	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/75	IN	21:31	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	DI	21:33	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	IN	22:20	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	DI	22:20	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	IN	23:59	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:03	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	23:48	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:54	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/75	IN	00:43	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	00:39	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	01:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	01:22	2	X	-9999.	-9.9	31.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/23/75	IN	02:31	2	X	-9999.	-9.9	22.5	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/75	DI	02:25	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	03:06	2	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/75	DI	03:10	2	X	-9999.	-9.9	31.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/23/75	IN	21:37	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	21:31	2	X	-9999.	-9.9	28.5	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/75	IN	22:26	2	X	-9999.	-9.9	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	DI	22:41	2	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	IN	23:12	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:14	2	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	23:57	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:03	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:41	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:13	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:28	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:03	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:03	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:41	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:41	2	X	-9999.	-9.9	29.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	03:21	2	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	03:24	2	X	-9999.	-9.9	29.0	1	1	6	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/24/75	IN	04:13	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:34	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	05:23	2	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:20	2	X	-9999.	-9.9	29.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/24/75	IN	06:04	2	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	06:08	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P=# OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/24/75	IN	21:26	2	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	21:29	2	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/24/75	IN	22:09	2	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/24/75	DI	22:11	2	X	-9999.	-9.9	28.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
04/24/75	IN	22:52	2	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/24/75	DI	22:52	2	X	-9999.	-9.9	28.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/24/75	IN	23:32	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	23:34	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	IN	00:21	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	00:14	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	IN	01:02	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	01:01	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	IN	01:43	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	01:49	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	IN	02:34	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	02:38	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	IN	03:14	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	DI	03:12	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	IN	03:54	2	X	-9999.	-9.9	24.0	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/25/75	DI	03:58	2	X	-9999.	-9.9	29.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/25/75	IN	04:38	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	04:34	2	X	-9999.	-9.9	29.0	1	2	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/25/75	IN	05:14	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	05:18	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
04/25/75	IN	06:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	DI	06:06	2	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	IN	11:41	2	X	-9999.	-9.9	23.0	1	1	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
04/25/75	DI	21:37	2	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	IN	22:32	2	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	DI	22:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/25/75	IN	23:14	2	X	-9999.	-9.9	28.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/25/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D= D

PUMP STATUS- P= # OF PUMPS OPERATI M=MODE OF OPERATION
(P=PULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	00:10	2	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	00:11	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	00:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:48	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:49	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	02:33	2	X	-9999.	-9.9	28.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	02:34	2	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:18	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:21	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	04:05	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	04:07	2	Y	-9999.	-9.9	29.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	04:51	2	X	-9999.	-9.9	28.5	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
[illegible]	DI	04:51	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	05:40	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:42	2	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	21:36	2	X	-9999.	-9.9	28.5	3	1	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5
[illegible]	DI	21:36	2	X	-9999.	-9.9	31.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	22:20	2	Y	-9999.	-9.9	28.5	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	22:20	2	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	23:10	2	X	-9999.	-9.9	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	23:07	2	X	-7599.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:50	2	X	-9999.	-9.9	28.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	23:55	2	Y	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	[illegible]:50	2	X	-9999.	-9.9	28.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	00:50	2	X	-9999.	-9.9	29.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	01:32	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:29	2	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	02:10	2	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	02:18	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:00	2	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	03:02	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- #= # OF PUMPS OPERATING; M=MODE OF O[illegible]TION
(F=FULL - T[illegible]TTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	03:45	2	X	-9999.	-9.9	28.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	03:52	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:30	2	X	-9999.	-9.9	28.5	4	1	2	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/27/75	DI	04:36	2	X	-9999.	-9.9	29.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	IN	05:20	2	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	05:24	2	X	-9999.	-9.9	29.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	IN	20:30	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	20:45	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	21:27	2	X	-9999.	-9.9	24.5	3	0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	DI	21:36	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	22:14	2	X	-9999.	-9.9	24.0	1	2	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/75	DI	22:24	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/75	IN	23:01	2	X	-9999.	-9.9	24.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/75	DI	23:09	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/75	IN	22:58	2	X	-9999.	-9.9	24.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/30/75	DI	23:16	2	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	00:30	2	X	-9999.	-9.9	24.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/75	DI	00:30	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:16	2	X	-9999.	-9.9	24.0	5	3	2	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/01/75	DI	01:20	2	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	02:06	2	X	-9999.	-9.9	23.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	02:14	2	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	02:57	2	X	-9999.	-9.9	23.5	2	3	4	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/01/75	DI	03:00	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:42	2	X	-9999.	-9.9	23.5	7	5	1	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/01/75	DI	03:50	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:36	2	X	-9999.	-9.9	23.5	2	1	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/01/75	DI	04:30	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:08	2	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:21	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:57	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:00	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	06:37	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:40	2	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:33	2	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	2	X	-9999.	-9.9	24.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	21:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:18	2	X	-9999.	-9.9	24.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	23:17	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	23:31	2	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/75	DI	23:29	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	00:13	2	X	-9999.	-9.9	24.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/03/75	DI	00:18	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	01:00	2	X	-9999.	-9.9	24.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/03/75	DI	01:00	2	X	-9999.	-9.9	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/03/75	IN	01:44	2	X	-9999.	-9.9	24.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/03/75	DI	01:48	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	02:40	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/03/75	DI	02:41	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	03:33	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	03:32	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	04:14	2	X	-9999.	-9.9	24.0	8	0	2	3	7	3	7	3	7	0	10	0	10	0	10	0	10
07/03/75	DI	04:20	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	IN	05:01	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	DI	05:04	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	IN	05:37	2	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/04/75	DI	05:40	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	IN	06:25	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	DI	06:24	2	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/04/75	IN	20:49	2	X	-9999.	-9.9	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	DI	20:36	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:53	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:41	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - U=UNKNOWN)

ST STATION; DI=DISCHARGE; IN=INTAKE

[illegible] VIABILITY-CLOPSIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	22:40	2	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	22:34	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:30	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:30	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	00:21	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	00:18	2	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:04	2	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:02	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	01:51	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:50	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	02:38	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	02:33	2	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	03:31	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:22	2	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	04:18	2	X	-9999.	-9.9	25.0	4	0	0	2	2	2	2	1	3	0	4	0	4	0	4	0	4
[illegible]	DI	04:15	2	X	-9999.	-9.9	31.3	1	0	3	1	3	1	3	0	4	0	4	0	4	0	4	0	4
[illegible]	IN	05:23	2	X	-9999.	-9.9	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
[illegible]	DI	05:15	2	X	-9999.	-9.9	31.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	IN	06:09	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:07	2	X	-9999.	-9.9	31.5	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
[illegible]	IN	06:52	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:51	2	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	IN	20:41	2	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:43	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	22:06	2	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	22:05	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:05	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	23:02	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	23:58	2	X	-9999.	-9.9	25.0	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
[illegible]	DI	23:55	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	00:44	2	X	-9999.	-9.9	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
[illegible]	DI	00:39	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (MMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]	IN	01:37	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	01:42	2	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	02:34	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	02:40	2	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	03:29	2	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	03:30	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	04:34	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	04:40	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	05:18	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	05:18	2	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	06:08	2	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	06:08	2	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	12:40	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	14:38	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	15:30	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	15:32	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:13	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	16:17	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	16:33	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:00	2	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	17:35	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	17:40	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	18:22	2	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	18:27	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:00	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:00	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	19:50	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	19:51	2	X	-9999.	-9.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	20:31	2	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	DI	20:39	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]	IN	21:10	2	X	-9999.	-9.9	34.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
[illegible]	DI	21:03	2	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

[illegible] ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
[illegible]/75	DI	19:05	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:01	1	X	-9999.	8.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	19:52	1	X	-9999.	8.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	20:30	1	X	-9999.	7.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	20:50	1	X	-9999.	7.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	21:40	1	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:38	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	22:50	1	X	-9999.	5.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	22:36	1	X	-9999.	5.0	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:20	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	19:17	1	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	20:20	1	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	20:18	1	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	21:05	1	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:05	1	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:10	1	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	19:15	1	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:25	1	X	-9999.	9.0	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	20:15	1	X	-9999.	9.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	21:30	1	X	-9999.	13.0	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:25	1	X	-9999.	13.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:09	1	X	-9999.	5.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	19:54	1	X	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	20:30	1	X	-9999.	5.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	19:55	1	X	-9999.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	21:05	1	X	221.	5.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	DI	21:01	1	X	231.	5.0	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[illegible]/75	IN	19:05	2	X	170.	14.0	17.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
10/13/75	DI	19:02	2	X	200.	14.0	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10/13/75	IN	20:05	2	X	170.	11.0	17.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10/13/75	DI	20:15	2	X	200.	14.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/13/75	IN	21:00	2	X	170.	14.0	17.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE, S=STUNNED, D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING, M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION: DI=DISCHARGE, IN=INTAKE

[illegible] VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
10/13/[illegible]	DI	21:03	2	X	200.	14.0	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10/[illegible]/[illegible]	IN	13:47	1	X	140.	15.0	12.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/[illegible]/[illegible]	DI	16:35	1	X	150.	15.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/[illegible]/[illegible]	IN	19:39	1	X	120.	13.0	12.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/[illegible]/[illegible]	DI	19:20	1	X	120.	13.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/[illegible]/[illegible]	IN	22:38	1	X	130.	10.0	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/[illegible]/[illegible]	DI	21:03	1	X	130.	10.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	IN	10:30	1	X	-9999.	4.5	12.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	DI	18:35	1	X	-9999.	4.5	15.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	IN	19:45	1	X	140.	5.0	12.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	DI	19:47	1	X	130.	5.0	15.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	IN	20:40	1	X	-9999.	5.0	12.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	DI	20:30	1	X	-9999.	5.0	15.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	IN	19:20	1	X	140.	5.0	14.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	DI	19:38	1	X	-9999.	5.0	14.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/[illegible]/[illegible]	DI	20:50	1	X	-9999.	5.0	14.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF [illegible]ITION
(F=FULL - [illegible]OTTLED - X=UNKNOWN)

STATION; DI=DISCHARGE; IN=INTAKE

1.2 DANSKAMMER POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/75	IN	22:30	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	22:29	4	X	-9999.	-9.9	28.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	00:09	4	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/10/75	DI	00:09	4	X	-9999.	-9.9	29.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	IN	01:38	4	X	-9999.	-9.9	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	DI	01:51	4	X	-9999.	-9.9	27.5	3	0	6	1	8	1	8	1	8	0	9	0	9	0	9	0	9
06/10/75	IN	03:10	4	X	-9999.	-9.9	21.0	1	0	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3
06/10/75	DI	03:15	4	X	-9999.	-9.9	27.0	5	1	2	3	5	2	6	2	6	2	6	2	6	1	7	0	8
06/10/75	IN	04:40	4	X	-9999.	-9.9	21.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	04:30	4	X	-9999.	-9.9	27.0	0	4	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/10/75	IN	05:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	05:42	4	X	-9999.	-9.9	27.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:00	4	X	-9999.	-9.9	27.5	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	IN	23:20	4	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	23:25	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	00:35	4	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	00:35	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:55	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	03:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	03:14	4	X	-9999.	-9.9	27.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	04:28	4	X	-9999.	-9.9	22.0	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	04:28	4	X	-9999.	-9.9	27.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/11/75	IN	05:44	4	X	-9999.	-9.9	21.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	05:41	4	X	-9999.	-9.9	27.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	23:15	4	X	-9999.	-9.9	22.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	00:34	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	02:03	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	02:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	03:25	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	03:25	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	04 39	4	X	-9999.	-9.9	21.8	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	04:37	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	05:50	4	X	-9999.	-9.9	21.8	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	DI	05:40	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	IN	21:18	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	21:15	4	X	-9999.	-9.9	28.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	IN	23:14	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:05	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	00:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	00:05	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	01:05	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:13	4	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	02:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	02:36	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	03:55	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:49	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	05:03	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	05:07	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	22:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	23:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	00:15	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	01:15	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:20	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	02:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:19	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	IN	03:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:10	4	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/75	IN	04:58	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:00	4	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/75	IN	22:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:04	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:28	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	00:48	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	4	X	-9999.	-9.9	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:44	4	X	-9999.	-9.9	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:44	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:40	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:43	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	04:45	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:04	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:58	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:55	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:55	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:41	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:50	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	00:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:33	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	01:25	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	IN	03:58	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:12	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	04:53	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:55	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	05:50	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:50	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	21:34	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:37	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:39	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:27	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:19	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	23:21	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:10	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:16	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:10	4	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	IN	02:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:02	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:50	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:55	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:42	4	X	-9999	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:33	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:25	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	05:30	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	05:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	22:16	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	22:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:10	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	23:32	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	00:23	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	00:20	4	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	01:35	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:36	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	02:43	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	02:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	03:50	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	03:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	05:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:45	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	22:06	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	21:42	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	23:11	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	23:16	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	00:20	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	00:19	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:33	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:31	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	02:36	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	03:34	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	03:37	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:39	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	05:40	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:35	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:12	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:10	4	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:20	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:26	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:21	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:27	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:16	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:50	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:15	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:12	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:25	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:15	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:16	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	06:08	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:09	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:53	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:50	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:55	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:50	4	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	22:50	4	X	-9999.	-9.9	30.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	23:44	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:33	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:32	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:25	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:30	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:23	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:18	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:10	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:00	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:16	4	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	05:05	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:03	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	06:51	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	07:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:52	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:50	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:55	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:50	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:10	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:45	4	X	-9999.	-9.9	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/08/75	DI	00:03	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:56	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:55	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	04:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:53	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:39	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:53	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	21:43	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:44	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:36	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:45	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	01:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/75	IN	02:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	02:05	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	03:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	03:12	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	04:19	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	04:13	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	05:15	4	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/15/75	DI	05:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	1	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	16:30	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	15:05	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/75	DI	14:45	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	15:09	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	16:01	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	16:05	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	17:14	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:02	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	18:02	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	19:55	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:06	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	19:56	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:58	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	20:55	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	21:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	05:10	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	05:20	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	06:35	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	06:30	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	IN	03:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:58	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:00	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:04	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:23	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:10	4	X	-9999.	-9.9	28.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/75	IN	00:48	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	4	X	-9999.	-9.9	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:44	4	X	-9999.	-9.9	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:44	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:40	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:43	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	04:45	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:04	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:58	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:53	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:55	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:41	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:50	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	00:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:33	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	01:25	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/75	IN	02:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:12	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	04:13	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	04:27	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	IN	05:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:23	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:57	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	22:23	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:07	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:00	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:50	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:43	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:31	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	02:21	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	02:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	22:28	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	22:45	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:45	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:35	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:22	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:17	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:15	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:10	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	03:05	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	01:35	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:36	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	02:43	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	02:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	03:50	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	03:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	05:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:45	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	22:06	4	X	-9999.	-9.9	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/26/75	DI	21:42	4	X	-9999.	-9.9	30.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/26/75	IN	23:11	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	23:16	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	00:20	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	00:19	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:33	4	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	01:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	02:36	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	03:34	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	03:37	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:39	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	05:40	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:35	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:12	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:10	4	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:20	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:26	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:21	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:27	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:16	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	06:51	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	07:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:52	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:50	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:55	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:50	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:10	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:03	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:56	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:55	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:00	4	X	-9999.	-9.9	31.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	IN	04:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:53	4	X	-9999.	-9.9	31.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	IN	05:39	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:53	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	21:43	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:44	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:36	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:45	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	01:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/75	IN	22:30	4	X	-9999.	-9.9	22.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/09/75	DI	22:29	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	00:09	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:09	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	01:38	4	X	-9999.	-9.9	22.0	1	4	7	1	11	1	11	1	11	1	11	1	11	1	11	0	12
06/10/75	DI	01:51	4	X	-9999.	-9.9	27.5	6	4	6	4	12	2	14	1	15	1	15	1	15	1	15	0	16
06/10/75	IN	03:10	4	X	-9999.	-9.9	21.0	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/10/75	DI	03:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:40	4	X	-9999.	-9.9	21.0	0	1	5	1	5	1	5	0	6	0	6	0	6	0	6	0	6
06/10/75	IN	04:30	4	X	-9999.	-9.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	05:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	05:42	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	22:00	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	23:20	4	X	-9999.	-9.9	22.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	DI	23:25	4	X	-9999.	-9.9	28.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	00:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	00:35	4	X	-9999.	-9.9	27.5	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/11/75	IN	01:55	4	X	-9999.	-9.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/11/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	03:10	4	X	-9999.	-9.9	22.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	03:14	4	X	-9999.	-9.9	27.5	1	2	5	1	7	1	7	1	7	1	7	0	8	0	8	0	8
06/11/75	IN	04:28	4	X	-9999.	-9.9	22.0	2	1	10	2	11	2	11	1	12	1	12	1	12	0	13	0	13
06/11/75	DI	04:28	4	X	-9999.	-9.9	27.0	0	2	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/11/75	IN	05:44	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:41	4	X	-9999.	-9.9	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/11/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	23:15	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	IN	00:34	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	4	X	-9999.	-9.9	28.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	02:03	4	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	02:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	03:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	03:25	4	X	-9999.	-9.9	20.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/12/75	IN	04:39	4	X	-9999.	-9.9	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	04:37	4	X	-9999.	-9.9	27.5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/12/75	IN	05:50	4	X	-9999.	-9.9	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	05:40	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	21:18	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	21:15	4	X	-9999.	-9.9	28.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	IN	23:14	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:05	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	00:10	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	00:05	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	01:05	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:10	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	02:39	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	02:36	4	X	-9999.	-9.9	28.0	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
06/13/75	IN	03:55	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:49	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	05:03	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	05:07	4	X	-9999.	-9.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/75	IN	22:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	23:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	23:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	00:15	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	01:15	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:20	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	02:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:19	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	IN	03:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:58	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:00	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:04	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:23	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:10	4	X	-9999.	-9.9	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	00:48	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	4	X	-9999.	-9.9	28.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:44	4	X	-9999.	-9.9	28.9	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	02:44	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:40	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:43	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	04:45	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:04	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:58	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:55	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:55	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:41	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:50	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	00:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:33	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	01:25	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/75	IN	02:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:12	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	04:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	04:27	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	05:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:28	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:57	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	22:23	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:07	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:00	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:50	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:48	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:31	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	02:21	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	02:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	22:28	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	22:45	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:45	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:35	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:22	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:17	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:15	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:10	4	X	-9999.	-9.9	23.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/75	DI	03:05	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	01:35	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:36	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	02:43	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	02:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	03:50	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	03:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	05:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:45	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	22:06	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	21:42	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	23:11	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	23:16	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	00:20	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	00:19	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:33	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	02:36	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	03:34	4	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	03:37	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	04:39	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	05:40	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:35	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:12	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:10	4	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:20	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:26	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:21	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:27	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:16	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:50	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:15	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:12	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:25	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:15	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:16	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	06:08	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:09	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:38	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:30	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:53	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:44	4	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	23:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:38	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:32	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:25	4	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	01:30	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:23	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:18	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:10	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:00	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:16	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:05	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:03	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/75	IN	22:30	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	22:29	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	00:09	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:09	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	01:38	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/10/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	03:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	03:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:30	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	05:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	05:42	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:00	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	23:20	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	23:25	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	00:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	00:35	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:55	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	03:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	03:14	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	04:28	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	04:28	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	05:44	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:41	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	23:15	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	00:34	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	00:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/75	IN	02:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:12	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	04:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	04:27	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	05:30	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:23	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:57	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	22:28	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:07	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:00	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:50	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:43	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:31	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	02:21	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	02:20	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	22:28	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	22:45	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:45	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:35	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:22	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:17	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:15	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:10	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	03:05	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	06:51	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	07:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:52	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:50	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:55	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:50	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:10	4	X	-9999.	-9.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
07/07/75	IN	23:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:03	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:56	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:55	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	04:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:53	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:39	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:55	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	21:43	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:44	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:36	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:45	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	01:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS-- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/75	IN	02:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	02:05	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	03:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	03:12	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	04:19	4	X	-9999.	-9.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/75	DI	04:13	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	05:15	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	05:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	1	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	16:30	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	15:05	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/75	DI	14:45	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	15:09	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	16:01	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	16:05	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	17:14	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:02	4	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	18:02	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:55	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:06	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	19:56	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:53	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	20:53	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	21:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	05:10	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	05:20	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	06:35	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	06:30	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/75	IN	02:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	02:05	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	03:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	03:12	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	04:19	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	04:13	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	05:15	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	05:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	1	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	16:30	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	15:05	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	14:45	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	15:09	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	16:01	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	16:05	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	17:14	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:02	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	18:02	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:06	4	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	IN	19:56	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:58	4	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	IN	20:55	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	21:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	05:10	4	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/13/75	DI	05:20	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	06:35	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	06:30	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
08/13/75	IN	07:30	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	07:15	4	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/13/75	IN	08:15	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	08:10	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	09:00	4	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/13/75	DI	09:00	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	09:55	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/07/75	DI	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	IN	17:30	4	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/18/75	DI	17:35	4	X	-9999.	-9.9	32.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
08/18/75	IN	18:25	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	DI	18:25	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	IN	19:35	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	DI	19:30	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	IN	20:38	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	DI	21:30	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	IN	22:25	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/18/75	DI	22:40	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	16:40	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	18:05	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	18:00	4	X	-9999.	-9.9	32.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
08/19/75	IN	18:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	19:00	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	19:55	4	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/19/75	DI	20:00	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	21:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	21:02	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	21:48	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	22:00	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	23:00	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	22:50	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
08/25/75	IN	16:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	16:50	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	17:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	17:45	4	X	-9999.	-9.9	32.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	18:30	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	18:35	4	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/25/75	IN	19:25	4	X	-9999.	-9.9	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/25/75	DI	19:45	4	X	-9999.	-9.9	32.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	20:37	4	X	-9999.	-9.9	25.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
08/25/75	DI	20:55	4	X	-9999.	-9.9	32.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
08/25/75	IN	21:55	4	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/25/75	DI	21:55	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	22:42	4	X	-9999.	-9.9	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/25/75	DI	22:50	4	X	-9999.	-9.9	32.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	16:50	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	16:50	4	X	-9999.	-9.9	32.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	17:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	17:45	4	X	-9999.	-9.9	32.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	18:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	18:40	4	X	-9999.	-9.9	32.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	19:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	19:30	4	X	-9999.	-9.9	32.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	20:24	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	20:30	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	21:15	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	21:15	4	X	-9999.	-9.9	32.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	22:15	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	22:15	4	X	-9999.	-9.9	31.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	IN	19:06	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	DI	19:08	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	IN	20:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	DI	20:15	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
08/13/75	IN	07:30	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	07:15	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	08:15	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	08:10	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	09:00	4	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/13/75	DI	09:00	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	09:55	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/09/75	DI	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	17:30	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	17:35	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	18:25	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	18:25	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	19:35	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	19:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	20:50	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	21:30	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	22:25	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	22:40	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	16:40	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	18:05	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	18:00	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	18:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	19:00	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	19:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	20:00	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	21:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	21:02	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	21:48	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	22:00	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	IN	23:00	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/19/75	DI	22:50	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
08/25/75	IN	16:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	16:50	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	17:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	17:45	4	X	-9999.	-9.9	32.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	18:30	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	18:35	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	19:25	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	19:45	4	X	-9999.	-9.9	32.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	20:37	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	20:55	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	21:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	21:55	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	IN	22:42	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/25/75	DI	22:50	4	X	-9999.	-9.9	32.7	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/26/75	IN	16:50	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	16:50	4	X	-9999.	-9.9	32.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	17:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	17:45	4	X	-9999.	-9.9	32.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	18:35	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	18:40	4	X	-9999.	-9.9	32.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	19:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	19:30	4	X	-9999.	-9.9	32.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	20:24	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	20:30	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	21:15	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	21:15	4	X	-9999.	-9.9	32.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	IN	22:15	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/26/75	DI	22:15	4	X	-9999.	-9.9	31.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	IN	19:04	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	DI	19:08	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	IN	20:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/09/75	DI	20:15	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/75	IN	22:30	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/75	DI	22:29	4	X	-9999.	-9.9	28.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	00:09	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	00:09	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	01:38	4	X	-9999.	-9.9	22.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/10/75	DI	01:51	4	X	-9999.	-9.9	27.5	2	1	8	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/10/75	IN	03:10	4	X	-9999.	-9.9	21.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/10/75	DI	03:15	4	X	-9999.	-9.9	27.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/10/75	IN	04:40	4	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	04:30	4	X	-9999.	-9.9	27.0	0	2	6	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/10/75	IN	05:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	05:42	4	X	-9999.	-9.9	27.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/10/75	IN	22:10	4	X	-9999.	-9.9	22.0	1	2	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	DI	22:00	4	X	-9999.	-9.9	27.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	IN	23:20	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	23:25	4	X	-9999.	-9.9	28.0	0	2	8	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/11/75	IN	00:35	4	X	-9999.	-9.9	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	00:35	4	X	-9999.	-9.9	27.5	0	1	8	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/11/75	IN	01:55	4	X	-9999.	-9.9	22.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	IN	03:10	4	X	-9999.	-9.9	22.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/11/75	DI	03:14	4	X	-9999.	-9.9	27.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/11/75	IN	04:28	4	X	-9999.	-9.9	22.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/11/75	DI	04:28	4	X	-9999.	-9.9	27.0	1	3	5	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/11/75	IN	05:44	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	05:41	4	X	-9999.	-9.9	27.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	3	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	8	1	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/11/75	IN	23:15	4	X	-9999.	-9.9	22.5	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/12/75	IN	00:34	4	X	-9999.	-9.9	22.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/12/75	DI	00:27	4	X	-9999.	-9.9	28.5	0	4	3	0	7	0	7	0	7	0	7	0	7	0	7	0	7

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	02:03	4	X	-9999.	-9.9	23.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/12/75	DI	02:00	4	X	-9999.	-9.9	28.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/12/75	IN	03:25	4	X	-9999.	-9.9	22.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/12/75	DI	03:25	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	04:39	4	X	-9999.	-9.9	21.8	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/12/75	DI	04:37	4	X	-9999.	-9.9	27.5	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/12/75	IN	05:50	4	X	-9999.	-9.9	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	05:40	4	X	-9999.	-9.9	27.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/12/75	IN	21:18	4	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	DI	21:15	4	X	-9999.	-9.9	28.5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/12/75	IN	23:14	4	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	23:05	4	X	-9999.	-9.9	28.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	00:10	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	00:05	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	01:05	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:13	4	X	-9999.	-9.9	29.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	02:39	4	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	DI	02:36	4	X	-9999.	-9.9	28.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/13/75	IN	03:55	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:49	4	X	-9999.	-9.9	27.0	0	2	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/13/75	IN	05:03	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	05:07	4	X	-9999.	-9.9	27.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/75	IN	22:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	1	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/16/75	IN	23:25	4	X	-9999.	-9.9	22.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/75	DI	23:15	4	X	-9999.	-9.9	27.0	3	0	8	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/17/75	IN	00:25	4	X	-9999.	-9.9	23.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/75	DI	00:15	4	X	-9999.	-9.9	21.5	2	1	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/17/75	IN	01:15	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	01:20	4	X	-9999.	-9.9	21.5	1	1	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/17/75	IN	02:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:19	4	X	-9999.	-9.9	21.0	1	2	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	IN	03:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:25	4	X	-9999.	-9.9	22.0	0	3	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/17/75	IN	04:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:10	4	X	-9999.	-9.9	22.0	1	3	2	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/17/75	IN	04:53	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:00	4	X	-9999.	-9.9	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/75	IN	22:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:04	4	X	-9999.	-9.9	29.0	1	0	21	0	22	0	22	0	22	0	22	0	22	0	22	0	22
06/17/75	IN	23:28	4	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	23:10	4	X	-9999.	-9.9	28.0	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/18/75	IN	00:48	4	X	-9999.	-9.9	22.0	0	4	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/18/75	DI	00:17	4	X	-9999.	-9.9	28.9	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	IN	01:35	4	X	-9999.	-9.9	22.0	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/18/75	DI	01:44	4	X	-9999.	-9.9	28.9	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/18/75	IN	02:46	4	X	-9999.	-9.9	22.0	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/18/75	DI	02:40	4	X	-9999.	-9.9	29.5	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/18/75	IN	03:50	4	X	-9999.	-9.9	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	DI	03:43	4	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	IN	04:45	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	4	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	IN	09:59	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:27	4	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	22:04	4	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	DI	21:58	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:55	4	X	-9999.	-9.9	23.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/75	DI	22:55	4	X	-9999.	-9.9	29.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/18/75	IN	23:41	4	X	-9999.	-9.9	22.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	DI	23:50	4	X	-9999.	-9.9	29.0	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/19/75	IN	00:39	4	X	-9999.	-9.9	22.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/19/75	DI	00:33	4	X	-9999.	-9.9	29.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/19/75	IN	01:21	4	X	-9999.	-9.9	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/19/75	DI	01:25	4	X	-9999.	-9.9	29.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/75	IN	02:21	4	X	-9999.	-9.9	22.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/18/75	DI	02:12	4	X	-9999.	-9.9	28.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/19/75	IN	03:21	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	DI	03:20	4	X	-9999.	-9.9	28.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/19/75	IN	04:18	4	X	-9999.	-9.9	22.0	1	2	8	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/19/75	DI	04:27	4	X	-9999.	-9.9	27.5	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/19/75	IN	05:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	05:23	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:37	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	22:23	4	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/19/75	IN	23:07	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:00	4	X	-9999.	-9.9	22.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/20/75	DI	00:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:50	4	X	-9999.	-9.9	22.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/20/75	DI	00:40	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/20/75	IN	01:43	4	X	-9999.	-9.9	22.5	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/20/75	DI	01:31	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/20/75	IN	02:21	4	X	-9999.	-9.9	22.5	0	3	5	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/20/75	DI	02:20	4	X	-9999.	-9.9	28.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/20/75	IN	22:23	4	X	-9999.	-9.9	22.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/20/75	DI	22:43	4	X	-9999.	-9.9	30.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	IN	23:45	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	DI	23:31	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:35	4	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	00:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	X	-9999.	-9.9	23.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/75	DI	01:22	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:17	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:15	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:10	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	03:05	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	IN	03:58	4	X	-9999.	-9.9	23.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/24/75	DI	04:12	4	X	-9999.	-9.9	30.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/24/75	IN	04:55	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	04:55	4	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	05:50	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:50	4	X	-9999.	-9.9	29.5	1	1	0	1	1	1	1	1	1	1	1	0	2	0	2	0	2
06/24/75	IN	21:34	4	X	-9999.	-9.9	22.5	0	5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/24/75	DI	21:37	4	X	-9999.	-9.9	30.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	22:39	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:27	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:19	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:21	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:10	4	X	-9999.	-9.9	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	DI	00:16	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	IN	01:05	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	01:10	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:02	4	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	IN	02:50	4	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	02:55	4	X	-9999.	-9.9	30.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/25/75	IN	03:42	4	X	-9999.	-9.9	23.5	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/25/75	DI	03:45	4	X	-9999.	-9.9	31.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/25/75	IN	04:33	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:25	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	IN	05:30	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	05:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	22:16	4	X	-9999.	-9.9	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	DI	22:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:10	4	X	-9999.	-9.9	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	23:32	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	00:23	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	00:20	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	01:35	4	X	-9999.	-9.9	23.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	01:36	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	02:43	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	02:50	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	03:50	4	X	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	DI	03:50	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	05:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:45	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	22:06	4	X	-9999.	-9.9	23.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/26/75	DI	21:42	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	23:11	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	DI	23:14	4	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	IN	00:20	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	00:19	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:33	4	X	-9999.	-9.9	23.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	01:31	4	X	-9999.	-9.9	30.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	02:36	4	X	-9999.	-9.9	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	IN	03:34	4	X	-9999.	-9.9	23.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	DI	03:37	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	IN	04:39	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	04:40	4	X	-9999.	-9.9	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	IN	05:40	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:35	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/75	IN	22:12	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:10	4	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:20	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:26	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	00:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:21	4	X	-9999.	-9.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	01:27	4	X	-9999.	-9.9	23.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	01:16	4	X	-9999.	-9.9	33.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:50	4	X	-9999.	-9.9	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	03:14	4	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	03:15	4	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	04:12	4	X	-9999.	-9.9	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	04:25	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:15	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:16	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	06:03	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:09	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:58	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:50	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:55	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:44	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:33	4	X	-9999.	-9.9	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	00:32	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:25	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:30	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	02:23	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:18	4	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	IN	03:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:10	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:00	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	05:16	4	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/75	DI	05:05	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:03	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	06:51	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	07:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:52	4	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/07/75	DI	20:50	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:55	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:50	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:10	4	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/07/75	IN	23:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:08	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:56	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/08/75	IN	01:55	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:55	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	03:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:00	4	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/08/75	IN	04:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	05:39	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:53	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/08/75	IN	06:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	21:48	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:44	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:36	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	23:45	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:55	4	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/15/75	DI	01:00	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP-LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/75	IN	02:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	02:05	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	03:14	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	03:12	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	04:19	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	04:13	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	05:15	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	05:20	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	1	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/75	DI	16:30	4	X	-9999.	-9.9	26.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/23/75	IN	15:05	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/75	DI	14:45	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	15:09	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	14:50	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	16:01	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	16:05	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	17:14	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	17:10	4	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:02	4	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	18:02	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	18:55	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:06	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	19:56	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	19:55	4	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	20:55	4	X	-9999.	-9.9	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
08/11/75	DI	21:00	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	05:10	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	05:20	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	IN	06:35	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/13/75	DI	06:30	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP.-JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
08/09/75	IN	22:30	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/09/75	DI	22:29	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	00:09	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	00:09	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	01:33	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	03:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	03:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	04:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	04:30	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	05:40	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	05:42	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	22:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	DI	22:00	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/10/75	IN	23:20	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/10/75	DI	23:25	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	00:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	00:33	4	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	IN	01:55	4	X	-9999.	-9.9	22.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
08/11/75	DI	01:51	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	03:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	03:14	4	X	-9999.	-9.9	27.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	IN	04:28	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	04:28	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	05:44	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	05:41	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	IN	22:10	4	X	-9999.	-9.9	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/11/75	IN	23:15	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/11/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/12/75	IN	00:34	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/12/75	DI	00:27	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	02:03	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	02:00	4	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	03:25	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	03:25	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	IN	04:39	4	X	-9999.	-9.9	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	04:37	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	05:50	4	X	-9999.	-9.9	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	05:40	4	X	-9999.	-9.9	27.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	IN	21:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	21:15	4	X	-9999.	-9.9	23.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/12/75	IN	23:14	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	DI	23:05	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	00:10	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	00:05	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	01:05	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	01:13	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	02:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	02:34	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	03:55	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	03:49	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	05:03	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	05:07	4	X	-9999.	-9.9	27.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/13/75	IN	22:18	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	22:10	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	IN	23:25	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	23:15	4	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:25	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	00:15	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	01:15	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:20	4	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	02:10	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	02:19	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	IN	03:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:25	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	04:17	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:10	4	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	04:58	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	05:00	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:05	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:09	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:28	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:10	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/75	IN	00:48	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:17	4	X	-9999.	-9.9	28.9	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	01:35	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:44	4	X	-9999.	-9.9	28.9	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	IN	02:44	4	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	DI	02:40	4	X	-9999.	-9.9	29.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	03:50	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:43	4	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	IN	04:45	4	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	09:39	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	05:37	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:04	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:58	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:55	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:41	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:50	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	00:39	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:33	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	01:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	01:25	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/75	IN	02:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	02:12	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	03:21	4	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	03:20	4	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	04:18	4	X	-9999.	-9.9	22.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	DI	04:27	4	X	-9999.	-9.9	27.5	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/10/75	IN	05:50	4	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	05:23	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	21:57	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:23	4	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	23:07	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	23:16	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:00	4	X	-9999.	-9.9	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/20/75	DI	00:00	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:50	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:40	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:48	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:31	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	02:21	4	X	-9999.	-9.9	22.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/20/75	DI	02:20	4	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/20/75	IN	23:28	4	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	23:45	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	23:45	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	23:31	4	X	-9999.	-9.9	30.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	00:35	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:22	4	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	02:17	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:15	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:10	4	X	-9999.	-9.9	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/75	DI	03:03	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	IN	03:58	4	X	-9999.	-9.9	28.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	04:12	4	X	-9999.	-9.9	30.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	04:55	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:55	4	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	05:50	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	05:50	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	21:34	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:37	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:39	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:27	4	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	23:19	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	23:21	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	00:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:16	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:05	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	01:10	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:10	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:02	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:50	4	X	-9999.	-9.9	28.5	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/25/75	DI	02:55	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:42	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:38	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:25	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	05:30	4	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	05:30	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	22:16	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	22:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	23:10	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	23:32	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	00:23	4	X	-9999.	-9.9	28.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	DI	00:20	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/26/75	IN	01:35	4	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	01:36	4	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/26/75	IN	02:43	4	X	-9999.	-9.9	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	DI	02:50	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	03:50	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	03:50	4	X	-9999.	-9.9	30.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/26/75	IN	05:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	04:45	4	X	-9999.	-9.9	30.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	22:06	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	21:42	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	23:11	4	X	-9999.	-9.9	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	DI	23:16	4	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	00:20	4	X	-9999.	-9.9	23.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	00:19	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	01:33	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	01:31	4	X	-9999.	-9.9	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	DI	02:26	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	03.34	4	X	-9999.	-9.9	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	03:37	4	X	-9999.	-9.9	30.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/27/75	IN	04.39	4	X	-9999.	-9.9	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	04:40	4	X	-9999.	-9.9	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	IN	05:40	4	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	05:35	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:12	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	22:10	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:20	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:26	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:21	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:27	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:16	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. CLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	02:25	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	01:50	4	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:14	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:15	4	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:12	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:25	4	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	05:15	4	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	05:16	4	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	06:08	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	06:09	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	20:35	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	20:30	4	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:55	4	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/01/75	IN	22:50	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	22:50	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	23:44	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	23:40	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:38	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:32	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:25	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:30	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	02:23	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:18	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:10	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:10	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:03	4	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:00	4	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/02/75	IN	05:16	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	05:05	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	06:03	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	06:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-UNID. DLUP. -JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	06:51	4	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	07:00	4	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	20:52	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	20:50	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:99	0	X	-9999.	-9.9	-9.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:55	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:50	4	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	DI	23:10	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	00:03	4	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	00:56	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:50	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:00	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:45	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	03:55	4	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/08/75	IN	03:55	4	X	-9779.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:00	4	X	-9999.	-9.9	31.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	IN	04:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	04:55	4	X	-9999.	-9.9	31.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/08/75	IN	05:39	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	05:58	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	06:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	06:45	4	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/75	IN	21:43	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	20:44	4	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	22:36	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	22:50	4	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/75	IN	23:45	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	23:50	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	IN	00:55	4	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	01:00	4	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

1.3 BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1975

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/03/75	IN	23:57	3	F	-9999.	0.2	21.0	4	0	1	3	2	1	4	0	5	0	5	0	5	0	5	0	5
06/04/75	DI	00:15	3	T	-9999.	0.2	25.0	2	3	10	3	12	2	13	1	14	1	14	1	14	1	14	1	14
06/04/75	DI	02:09	3	T	-9999.	0.2	24.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	IN	02:27	3	T	-9999.	0.1	20.5	5	5	4	4	10	2	12	2	12	2	12	2	12	2	12	2	12
06/04/75	DI	04:00	3	T	-9999.	-0.5	23.5	1	1	3	1	4	1	4	1	4	0	5	0	5	0	5	0	5
06/04/75	IN	04:20	3	T	-9999.	-0.5	20.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/04/75	DI	21:26	4	T	-9999.	0.4	21.5	3	0	3	3	3	0	6	0	6	0	6	0	6	0	6	0	6
06/04/75	IN	21:40	4	T	-9999.	0.4	21.0	0	1	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/04/75	IN	22:55	4	T	-9999.	0.3	21.0	3	3	2	3	5	2	6	2	6	2	6	2	6	2	6	2	6
06/04/75	DI	22:57	4	T	-9999.	0.3	23.5	5	0	1	5	1	4	2	3	3	3	3	3	3	3	3	2	4
06/05/75	IN	00:19	4	T	-9999.	0.1	21.0	5	2	0	5	2	4	3	4	3	4	3	4	3	4	3	4	3
06/05/75	DI	00:23	4	T	-9999.	0.1	24.5	4	2	1	4	3	4	3	4	3	4	3	4	3	4	3	4	3
06/05/75	IN	01:38	4	T	-9999.	0.1	21.0	3	1	2	2	4	1	5	1	5	0	6	0	6	0	6	0	6
06/05/75	DI	01:42	4	T	-9999.	0.0	24.5	4	1	0	1	4	1	4	1	4	1	4	1	4	1	4	0	5
06/05/75	DI	03:06	4	T	-9999.	0.0	24.5	5	1	2	5	3	5	3	5	3	5	3	5	3	5	3	4	4
06/05/75	IN	03:03	4	T	-9999.	0.0	21.0	4	2	0	4	2	4	2	4	2	4	2	4	2	3	3	3	3
06/05/75	IN	04:10	4	T	-9999.	-0.3	20.5	7	5	1	8	5	8	5	8	5	7	6	6	7	5	8	3	10
06/05/75	DI	04:16	4	T	-9999.	-0.3	24.0	6	1	1	7	1	7	1	6	2	6	2	6	2	5	3	4	4
06/05/75	DI	21:45	4	T	-9999.	1.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	21:53	4	T	-9999.	0.9	20.0	2	1	2	3	2	1	4	1	4	1	4	1	4	1	4	1	4
06/06/75	DI	23:05	4	T	-9999.	0.7	27.0	3	0	0	3	0	3	0	2	1	2	1	2	1	1	2	1	2
06/06/75	IN	23:09	4	T	-9999.	0.7	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/06/75	IN	00:29	4	T	-9999.	0.4	20.0	2	2	0	4	0	3	1	3	1	3	1	3	1	3	1	3	1
06/06/75	IN	01:27	4	T	-9999.	0.3	20.0	2	1	0	2	1	1	2	1	2	0	3	0	3	0	3	0	3
06/06/75	DI	01:39	4	T	-9999.	0.3	23.0	1	2	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/06/75	DI	02:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:51	4	T	-9999.	0.2	20.0	3	8	2	7	6	7	6	6	7	5	8	5	8	5	8	4	9
06/06/75	IN	03:51	4	T	-9999.	-0.2	20.0	3	0	0	3	0	3	0	3	0	3	0	2	1	2	1	1	2
06/06/75	DI	03:53	4	T	-9999.	-0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:46	4	T	-9999.	0.4	20.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	2	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/06/75	DI	04:48	4	T	-9999.	0.4	22.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/75	IN	21:50	4	T	-9999.	0.9	20.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/09/75	DI	21:57	4	T	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	IN	22:05	4	T	-9999.	1.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	23:02	4	T	-9999.	1.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	00:00	4	T	-9999.	1.0	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/75	IN	00:04	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:59	4	T	-9999.	0.8	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/75	IN	01:00	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	02:00	4	T	-9999.	0.5	23.0	2	1	0	2	1	2	1	2	1	2	1	2	1	2	1	0	3
06/10/75	IN	02:15	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	03:00	4	T	-9999.	-9.9	22.5	3	1	0	3	1	3	1	3	1	3	1	2	2	2	2	2	2
06/10/75	IN	03:28	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	04:24	4	T	-9999.	-9.9	22.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/75	IN	04:XX	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:07	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:10	4	T	-9999.	1.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	23:32	4	T	-9999.	1.0	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	23:36	4	T	-9999.	1.0	21.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	01:08	4	T	-9999.	0.8	21.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	01:10	4	T	-9999.	0.8	21.5	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	DI	02:27	4	T	-9999.	0.5	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	02:27	4	T	-9999.	0.5	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	03:45	4	T	-9999.	0.1	21.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/11/75	DI	21:12	4	T	-9999.	0.3	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	21:25	4	T	-9999.	0.3	21.5	3	0	2	3	2	3	2	2	3	2	3	2	3	2	3	2	3
06/11/75	DI	22:33	4	T	-9999.	0.8	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	22:37	4	T	-9999.	0.8	21.5	1	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/11/75	DI	23:25	4	T	-9999.	1.0	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	23:41	4	T	-9999.	1.0	21.0	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/12/75	IN	00:52	4	T	-9999.	1.0	21.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/12/75	DI	00:5X	4	T	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/12/75	IN	01:51	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	01:54	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	02:53	4	T	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	02:57	4	T	-9999.	0.6	21.0	2	0	0	2	0	2	0	2	0	1	1	1	1	1	1	1	1	1
05/12/75	DI	03:55	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	04:03	4	T	-9999.	0.3	21.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
05/12/75	IN	21:12	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	21:15	4	T	-9999.	-9.9	24.0	1	1	0	2	0	2	0	2	0	2	0	1	1	1	1	0	2	
05/12/75	DI	22:12	4	T	-9999.	0.6	26.5	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6	
05/12/75	IN	22:16	4	T	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	23:12	4	T	-9999.	0.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
05/12/75	IN	23:14	4	T	-9999.	0.9	21.0	1	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
05/13/75	DI	00:21	4	T	-9999.	11.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	00:30	4	T	-9999.	1.1	20.5	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1	3	
05/13/75	DI	01:31	4	T	-9999.	1.1	24.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	
05/13/75	IN	01:35	5	T	-9999.	1.1	20.5	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
05/13/75	DI	02:25	4	T	-9999.	1.1	23.5	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	
05/13/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	03:11	4	T	-9999.	1.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	03:15	4	T	-9999.	0.9	23.5	3	0	0	2	1	1	2	1	2	1	2	1	2	1	2	1	2	
05/13/75	DI	04:00	4	T	-9999.	0.7	24.0	1	1	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	
05/13/75	IN	04:12	4	T	-9999.	0.7	20.5	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	
05/16/75	IN	21:19	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	21:13	4	T	-9999.	0.2	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	22:17	4	T	-9999.	0.0	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	22:29	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	23:10	4	T	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	23:11	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:00	4	T	-9999.	0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:05	4	T	-9999.	0.0	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
05/17/75	IN	00:10	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:11	4	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(P=PUMP - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	DI	02:17	4	T	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	03:06	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:15	4	T	-9999.	0.6	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/17/75	DI	04:00	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:01	4	T	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	21:25	4	T	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:15	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:25	4	T	-9999.	0.2	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:16	4	T	-9999.	-0.1	32.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	1
06/17/75	IN	23:35	4	T	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:14	4	T	-9999.	-0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	00:18	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:00	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:11	4	T	-9999.	-0.2	31.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
06/18/75	IN	01:50	4	T	-9999.	0.0	22.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	DI	02:02	4	T	-9999.	0.0	29.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	IN	02:45	4	T	-9999.	0.2	22.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
06/18/75	DI	02:58	4	T	-9999.	0.2	29.5	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	1
06/18/75	IN	03:45	4	T	-9999.	0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	04:45	4	T	-9999.	0.5	28.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	DI	21:06	4	T	-9999.	0.6	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	21:14	4	T	-9999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:57	4	T	-9999.	0.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:01	4	T	-9999.	0.4	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	IN	22:36	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:46	4	T	-9999.	0.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:31	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:42	4	T	-9999.	0.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:20	4	T	-9999.	0.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:25	4	T	-9999.	0.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	02:06	4	T	-9999.	-0.1	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/19/75	DI	02:11	4	T	-9999.	-0.1	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/19/75	IN	02:02	4	T	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:03	4	T	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:48	4	T	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:49	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:17	4	T	-9999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	22:08	4	T	-9999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	22:50	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	23:03	4	T	-9999.	0.4	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:06	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:06	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:15	4	T	-9999.	0.2	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:56	4	T	-9999.	0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:58	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:37	4	T	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:40	4	T	-9999.	-0.2	31.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	1
06/23/75	IN	22:14	4	T	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	22:45	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:47	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:03	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:43	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:52	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:36	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:42	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:23	4	T	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:30	4	T	-9999.	0.3	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:24	4	T	-9999.	0.0	25.0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:12	4	T	-9999.	-0.2	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	21:44	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:49	4	T	-9999.	-0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:37	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:49	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:47	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	DI	23:47	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:47	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:32	4	T	-9999.	0.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:22	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:25	4	T	-9999.	0.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:12	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:27	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:10	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:15	4	T	-9999.	-0.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/26/75	IN	09:08	4	T	-9999.	-0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	09:10	4	T	-9999.	-0.2	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	10:06	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	10:45	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	10:57	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	12:26	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	13:06	4	T	-9999.	0.7	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	13:12	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	14:15	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	14:20	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	15:00	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	15:10	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	16:05	4	T	-9999.	0.3	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	IN	10:16	4	T	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	10:25	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	11:14	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	11:20	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:05	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:10	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:50	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:58	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	13:45	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	13:49	4	T	-9999.	0.1	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS YOLK-SAC LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/06/75	IN	23:57	3	F	-9999.	0.2	21.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	DI	00:15	3	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	02:08	3	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:27	3	T	-9999.	0.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:00	3	T	-9999.	-0.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	04:20	3	T	-9999.	-0.5	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	21:36	4	T	-9999.	0.4	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	21:40	4	T	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:55	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	22:57	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	00:19	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:33	4	T	-9999.	0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	01:38	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	01:42	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	03:00	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	03:03	4	T	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	04:19	4	T	-9999.	-0.3	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	04:16	4	T	-9999.	-0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	21:45	4	T	-9999.	1.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	21:53	4	T	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	22:05	4	T	-9999.	0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	23:03	4	T	-9999.	0.7	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	00:20	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:37	4	T	-9999.	0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	01:39	4	T	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	02:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:51	4	T	-9999.	0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	03:51	4	T	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	03:53	4	T	-9999.	-0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:46	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS JUVENILES/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/04/75	IN	23:57	3	F	-9999.	0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	00:15	3	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	02:09	3	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:27	3	T	-9999.	0.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:00	3	T	-9999.	-0.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	04:20	3	T	-9999.	-0.5	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	21:36	4	T	-9999.	0.4	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	21:40	4	T	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:15	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	22:57	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	00:19	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:33	4	T	-9999.	0.1	24.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	01:33	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	01:42	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	03:00	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	03:03	4	T	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	04:10	4	T	-9999.	-0.3	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	04:16	4	T	-9999.	-0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	21:45	4	T	-9999.	1.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	21:53	4	T	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	23:05	4	T	-9999.	0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	23:09	4	T	-9999.	0.7	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:30	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	00:30	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:37	4	T	-9999.	0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	01:39	4	T	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	02:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:51	4	T	-9999.	0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:51	4	T	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	04:53	4	T	-9999.	-0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:46	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS JUVENILES/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/12/75	IN	01:51	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	00:52	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	02:52	4	T	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	02:57	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	03:55	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	04:03	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	21:13	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	21:15	4	T	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	22:12	4	T	-9999.	0.6	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	22:16	4	T	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	23:12	4	T	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	23:14	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	DI	00:21	4	T	-9999.	11.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	IN	00:00	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	01:21	4	T	-9999.	1.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	01:25	5	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	02:25	4	T	-9999.	1.1	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	03:11	4	T	-9999.	1.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	03:15	4	T	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	04:00	4	T	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	04:12	4	T	-9999.	0.7	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	21:12	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	21:13	4	T	-9999.	0.2	28.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0
05/16/75	DI	22:12	4	T	-9999.	0.0	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	22:29	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	23:10	4	T	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	23:11	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:01	4	T	-9999.	0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:06	4	T	-9999.	0.0	25.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0
05/17/75	IN	00:59	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	01:11	4	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--WHITE PERCH YOLK-SAC LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/12/75	IN	00:51	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	01:53	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	02:53	4	T	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	02:57	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	03:55	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	04:03	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	21:13	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	21:15	4	T	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	22:12	4	T	-9999.	0.6	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	22:16	4	T	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	23:12	4	T	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	23:14	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	DI	00:21	4	T	-9999.	11.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	00:30	4	T	-9999.	1.1	20.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
05/13/75	DI	01:31	4	T	-9999.	1.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	01:35	5	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	02:25	4	T	-9999.	1.1	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	03:11	4	T	-9999.	1.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	03:15	4	T	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	DI	04:00	4	T	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/13/75	IN	04:12	4	T	-9999.	0.7	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	21:12	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	21:13	4	T	-9999.	0.2	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	22:12	4	T	-9999.	-0.0	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	22:29	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	IN	23:10	4	T	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/16/75	DI	23:11	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:01	4	T	-9999.	0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:06	4	T	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:59	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	01:11	4	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/04/75	IN	23:57	3	F	-9999.	0.2	21.0	7	1	7	6	9	5	10	5	10	5	10	5	10	5	10	4	11
06/04/75	DI	00:15	3	T	-9999.	0.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/04/75	DI	02:09	3	T	-9999.	0.2	24.0	0	1	6	1	6	1	6	1	6	1	6	1	6	1	6	0	7
06/04/75	IN	02:27	3	T	-9999.	0.1	20.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/04/75	DI	04:00	3	T	-9999.	-0.5	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/04/75	IN	04:20	3	T	-9999.	-0.5	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/75	DI	21:36	4	T	-9999.	0.4	21.5	2	1	0	2	1	2	1	2	1	1	2	1	2	1	2	1	2
06/04/75	IN	21:40	4	T	-9999.	0.4	21.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/04/75	IN	22:55	4	T	-9999.	0.3	21.0	1	0	2	1	2	1	2	1	2	1	2	1	2	0	3	0	3
06/04/75	DI	23:57	4	T	-9999.	0.3	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	00:19	4	T	-9999.	0.1	21.0	2	2	4	4	4	3	5	1	7	0	8	0	8	0	8	0	8
06/05/75	DI	00:33	4	T	-9999.	0.1	24.5	2	3	1	1	5	1	5	1	5	1	5	1	5	1	5	1	5
06/05/75	IN	01:38	4	T	-9999.	0.1	21.0	3	1	4	2	6	2	6	2	6	2	6	2	6	2	6	2	6
06/05/75	DI	01:42	4	T	-9999.	0.0	24.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/05/75	DI	03:00	4	T	-9999.	0.0	24.5	3	0	2	1	4	1	4	1	4	1	4	1	4	0	5	0	5
06/05/75	IN	03:03	4	T	-9999.	0.0	21.0	3	0	0	2	1	1	2	1	2	1	2	1	2	0	3	0	3
06/05/75	IN	04:19	4	T	-9999.	-0.2	20.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/05/75	DI	04:20	4	T	-9999.	-0.3	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/05/75	DI	21:45	4	T	-9999.	1.0	26.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/05/75	IN	21:52	4	T	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	23:05	4	T	-9999.	0.7	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	IN	23:09	4	T	-9999.	0.7	20.0	1	1	0	2	0	2	0	2	0	2	0	2	0	1	1	0	2
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	2	1	2	2	3	2	3	2	3	2	3	2	3	2	3	2	3
06/06/75	DI	00:30	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	00:38	4	T	-9999.	0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:37	4	T	-9999.	0.3	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/06/75	DI	01:39	4	T	-9999.	0.2	23.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/06/75	DI	02:49	4	T	-9999.	0.2	22.5	2	1	1	3	1	3	1	2	2	2	2	2	2	2	2	2	2
06/06/75	IN	02:51	4	T	-9999.	0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	03:51	4	T	-9999.	-0.2	20.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/06/75	DI	03:53	4	T	-9999.	-0.2	22.5	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/06/75	IN	04:46	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- (N=NI IVE; S=STUNNED; D=DEAD)

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/06/75	DI	04:48	4	T	-9999.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/75	IN	21:55	4	T	-9999.	0.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	21:57	4	T	-9999.	1.0	28.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/75	IN	22:05	4	T	-9999.	1.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	23:02	4	T	-9999.	1.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:00	4	T	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	00:04	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	00:59	4	T	-9999.	0.8	24.0	2	0	0	2	0	2	0	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	01:00	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	02:09	4	T	-9999.	0.5	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/10/75	IN	02:15	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	04:09	4	T	-9999.	-9.9	23.5	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	03:28	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	04:24	4	T	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	04:XX	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:07	4	T	-9999.	1.1	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	22:10	4	T	-9999.	1.1	22.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/10/75	DI	23:32	4	T	-9999.	1.0	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	23:36	4	T	-9999.	1.0	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	01:08	4	T	-9999.	0.8	21.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/11/75	IN	01:10	4	T	-9999.	0.8	21.5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/11/75	DI	02:27	4	T	-9999.	0.5	21.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/11/75	IN	02:27	4	T	-9999.	0.5	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	03:45	4	T	-9999.	0.1	21.5	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/11/75	DI	21:12	4	T	-9999.	0.3	29.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/11/75	IN	21:25	4	T	-9999.	0.3	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:32	4	T	-9999.	0.8	28.5	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/11/75	IN	22:37	4	T	-9999.	0.8	21.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/11/75	DI	23:35	4	T	-9999.	1.0	26.0	3	1	0	3	1	3	1	3	1	3	1	3	1	2	2	0	4
06/11/75	IN	23:41	4	T	-9999.	1.0	21.0	2	0	0	2	0	2	0	2	0	2	0	1	1	1	1	1	1
06/12/75	IN	00:52	4	T	-9999.	1.0	21.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/12/75	DI	00:53	4	T	-9999.	1.0	25.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/12/75	IN	01:51	4	T	-9999.	0.8	21.0	0	2	1	2	1	1	2	1	2	1	2	1	2	1	2	1	2
06/12/75	DI	01:53	4	T	-9999.	0.8	24.0	0	4	1	2	3	2	3	2	3	2	3	2	3	2	3	2	3
06/12/75	DI	02:53	4	T	-9999.	0.6	24.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/12/75	IN	02:57	4	T	-9999.	0.6	21.0	2	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/12/75	DI	03:55	4	T	-9999.	0.3	24.0	1	1	1	2	1	1	2	1	2	1	2	1	2	1	2	1	2
06/12/75	IN	04:03	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/12/75	IN	21:13	4	T	-9999.	0.6	21.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	1	2
06/12/75	DI	21:15	4	T	-9999.	-9.9	29.0	2	2	0	3	1	2	2	2	2	2	2	1	3	1	3	1	3
06/12/75	DI	22:12	4	T	-9999.	0.6	26.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/12/75	IN	22:16	4	T	-9999.	0.6	20.0	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
06/12/75	DI	23:12	4	T	-9999.	0.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/12/75	IN	23:14	4	T	-9999.	0.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	00:21	4	T	-9999.	11.0	25.0	3	1	0	1	3	1	3	1	3	1	3	1	3	1	3	1	3
06/13/75	IN	00:30	4	T	-9999.	1.1	20.5	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/13/75	DI	01:31	4	T	-9999.	1.1	24.5	2	0	2	1	3	1	3	1	3	1	3	1	3	1	3	1	3
06/13/75	IN	01:35	5	T	-9999.	1.1	20.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/13/75	DI	02:25	4	T	-9999.	1.1	23.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/13/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	03:11	4	T	-9999.	1.0	20.5	1	2	2	1	4	1	4	1	4	1	4	1	4	1	4	1	4
06/13/75	DI	03:15	4	T	-9999.	0.9	23.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/13/75	DI	04:00	4	T	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	04:12	4	T	-9999.	0.7	20.5	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/16/75	IN	21:12	4	T	-9999.	0.2	22.0	2	0	0	2	0	2	0	2	0	1	1	1	1	0	2	0	2
06/16/75	DI	21:13	4	T	-9999.	0.2	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:12	4	T	-9999.	0.0	27.5	6	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3
06/16/75	IN	22:29	4	T	-9999.	0.0	22.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/16/75	IN	23:10	4	T	-9999.	-0.1	22.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/16/75	DI	23:11	4	T	-9999.	-0.1	25.0	9	3	1	9	4	9	4	7	6	6	7	5	8	4	9	4	9
06/17/75	IN	00:01	4	T	-9999.	0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	00:06	4	T	-9999.	0.0	25.0	15	3	6	15	9	8	16	4	20	4	20	4	20	4	20	4	20
06/17/75	IN	00:59	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	01:11	4	T	-9999.	0.2	25.0	3	1	4	2	6	2	6	2	6	2	6	2	6	2	6	0	8

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	DI	02:17	4	T	-9999.	0.5	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	03:08	4	T	-9999.	0.6	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	03:15	4	T	-9999.	0.6	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/75	DI	04:00	4	T	-9999.	0.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	04:01	4	T	-9999.	0.8	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	21:25	4	T	-9999.	0.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:15	4	T	-9999.	0.2	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/75	DI	22:25	4	T	-9999.	0.2	32.0	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/17/75	DI	23:16	4	T	-9999.	-0.1	32.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/17/75	IN	23:35	4	T	-9999.	-0.1	23.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/18/75	DI	00:14	4	T	-9999.	-0.2	31.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	00:18	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:09	4	T	-9999.	-0.2	23.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/75	DI	01:11	4	T	-9999.	-0.2	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:53	4	T	-9999.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:02	4	T	-9999.	0.0	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:45	4	T	-9999.	0.2	22.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/75	DI	02:58	4	T	-9999.	0.2	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	03:45	4	T	-9999.	0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:45	4	T	-9999.	0.5	28.5	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/18/75	DI	21:06	4	T	-9999.	0.6	34.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/75	IN	21:14	4	T	-9999.	0.6	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	DI	21:57	4	T	-9999.	0.4	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/75	IN	22:01	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:36	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:46	4	T	-9999.	0.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:31	4	T	-9999.	0.2	23.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/75	DI	23:32	4	T	-9999.	0.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:25	4	T	-9999.	0.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:25	4	T	-9999.	0.0	32.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	IN	02:06	4	T	-9999.	-0.1	23.0	5	1	0	6	0	3	3	3	3	3	3	2	4	1	5	1	5
06/19/75	DI	02:11	4	T	-9999.	-0.1	30.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/19/75	IN	03:02	4	T	-9999.	0.0	23.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/19/75	DI	03:03	4	T	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	DI	03:48	4	T	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:49	4	T	-9999.	0.2	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	IN	21:17	4	T	-9999.	0.8	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	IN	22:08	4	T	-9999.	0.6	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/19/75	IN	22:55	4	T	-9999.	0.4	23.5	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	DI	23:03	4	T	-9999.	0.4	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:26	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:06	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:15	4	T	-9999.	0.2	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:56	4	T	-9999.	0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:58	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:37	4	T	-9999.	-0.2	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/20/75	DI	01:40	4	T	-9999.	-0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	22:14	4	T	-9999.	0.8	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/75	IN	22:45	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:47	4	T	-9999.	0.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	DI	00:03	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:43	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:52	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:36	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:42	4	T	-9999.	0.8	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:23	4	T	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:30	4	T	-9999.	0.3	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:25	4	T	-9999.	0.0	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/75	DI	04:12	4	T	-9999.	-0.2	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/75	IN	21:44	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:49	4	T	-9999.	-0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:37	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:49	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:37	4	T	-9999.	0.8	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	DI	23:47	4	T	-9999.	0.8	34.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	DI	00:47	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:32	4	T	-9999.	0.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	02:22	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:25	4	T	-9999.	0.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:12	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:27	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:10	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:15	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	09:00	4	T	-9999.	-0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	09:15	4	T	-9999.	-0.2	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	10:06	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	10:45	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	10:57	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	12:26	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	13:16	4	T	-9999.	0.7	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/26/75	IN	12:12	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	14:15	4	T	-9999.	0.7	25.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/26/75	DI	14:20	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	IN	15:00	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	15:10	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/75	DI	16:03	4	T	-9999.	0.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	10:16	4	T	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	10:25	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	11:14	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	11:20	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:08	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:10	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:50	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:58	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	13:45	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	13:49	4	T	-9999.	0.1	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	14:40	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	14:45	4	T	-9999.	0.7	35.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/27/75	DI	15:35	4	T	-9999.	0.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	15:36	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	21:05	4	T	-9999.	0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	21:10	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	22:01	4	T	-9999.	0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	22:17	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	22:58	4	T	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	23:05	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	23:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	23:55	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	00:45	4	T	-9999.	0.4	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	00:53	4	T	-9999.	0.4	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	01:41	4	T	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	01:43	4	T	-9999.	0.5	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	02:25	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	02:33	4	T	-9999.	0.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	03:16	4	T	-9999.	0.7	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	03:22	4	T	-9999.	0.8	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	04:09	4	T	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	04:09	4	T	-9999.	0.8	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	IN	21:20	4	T	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/75	DI	21:32	4	T	-9999.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:36	4	T	-9999.	0.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	23:15	4	T	-9999.	0.9	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/75	DI	23:16	4	T	-9999.	0.1	33.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	00:11	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	00:11	4	T	-9999.	0.2	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:06	4	T	-9999.	0.3	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:08	4	T	-9999.	0.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:09	4	T	-9999.	0.5	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ACTIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/75	IN	02:14	4	T	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	03:11	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	03:12	4	T	-9999.	0.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	04:11	4	T	-9999.	0.7	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	04:11	4	T	-9999.	0.8	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	09:13	4	T	-9999.	0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	09:16	4	T	-9999.	0.2	22.X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	10:03	4	T	-9999.	0.0	22.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	10:09	4	T	-9999.	0.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	11:01	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	11:52	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	11:58	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	12:51	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	12:58	4	T	-9999.	-0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	13:50	4	T	-9999.	-0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	13:51	4	T	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	14:46	4	T	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	14:51	4	T	-9999.	0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	IN	15:45	4	T	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	15:46	4	T	-9999.	0.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:05	4	T	-9999.	1.1	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:05	4	T	-9999.	1.1	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	22:13	4	T	-9999.	1.1	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	DI	22:23	4	T	-9999.	1.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	23:38	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	23:39	4	T	-9999.	0.8	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	01:00	4	T	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	T	-9999.	0.5	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:05	4	T	-9999.	0.2	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:11	4	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	02:54	4	T	-9999.	0.1	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	02:56	4	T	-9999.	0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY WHITE PERCH LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/11/75	DI	11:55	4	T	-9999.	0.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	12:04	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	13:19	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	13:30	4	T	-9999.	0.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	14:49	4	T	-9999.	0.7	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	14:54	4	T	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	16:09	4	T	-9999.	0.3	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	16:10	4	T	-9999.	0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	09:43	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	10:01	4	T	-9999.	-0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	11:17	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	11:18	4	T	-9999.	-0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	14:50	4	T	-9999.	0.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	14:52	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	16:15	4	T	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	16:20	4	T	-9999.	0.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	13:06	4	T	-9999.	-0.3	26.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/17/75	DI	13:16	4	T	-9999.	-0.3	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	14:03	4	T	-9999.	-0.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	14:05	4	F	-9999.	-0.1	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	14:45	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	15:04	4	F	-9999.	0.2	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	15:48	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	15:54	4	F	-9999.	0.2	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	10:14	4	F	-9999.	0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	10:15	4	F	-9999.	0.8	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	11:13	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	11:17	4	F	-9999.	0.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	12:08	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	12:15	4	F	-9999.	0.6	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	13:58	4	F	-9999.	0.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	13:58	4	F	-9999.	0.2	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY YOLK-SAC LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/75	DI	00:54	4	T	-9999.	-0.1	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.	0
07/08/75	IN	03:56	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	21:25	4	T	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	21:31	4	T	-9999.	1.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	IN	22:25	4	T	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	22:37	4	T	-9999.	1.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	23:40	4	T	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	23:42	4	T	-9999.	1.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	00:45	4	T	-9999.	0.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	00:50	4	T	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	01:40	4	T	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	01:57	4	T	-9999.	0.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	02:55	4	T	-9999.	0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	02:59	4	T	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	IN	03:49	4	T	-9999.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/75	DI	03:56	4	T	-9999.	0.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	09:12	4	T	-9999.	0.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	09:14	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	10:14	4	T	-9999.	0.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	10:15	4	T	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	11:32	4	T	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	11:50	4	T	-9999.	0.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/10/75	IN	12:55	5	T	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	13:04	4	T	-9999.	0.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	14:09	4	T	-9999.	0.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	14:10	4	T	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	15:50	4	T	-9999.	0.0	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	16:05	4	T	-9999.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	09:03	4	T	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	09:15	4	T	-9999.	0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	10:39	4	T	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	10:45	4	T	-9999.	0.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY YOLK-SAC LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/11/75	DI	11:55	4	T	-9999.	0.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	12:04	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	13:19	4	T	-9999.	0.9	26.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/11/75	DI	13:20	4	T	-9999.	0.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	14:49	4	T	-9999.	0.7	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	14:54	4	T	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	16:09	4	T	-9999.	0.3	35.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/11/75	IN	16:10	4	T	-9999.	0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	09:43	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	10:01	4	T	-9999.	-0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	11:17	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	11:18	4	T	-9999.	-0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	14:50	4	T	-9999.	0.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	14:52	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	16:15	4	T	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	16:20	4	T	-9999.	0.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	13:06	4	T	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	13:16	4	T	-9999.	-0.3	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	14:03	4	T	-9999.	-0.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	14:05	4	F	-9999.	-0.1	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	14:45	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	15:04	4	F	-9999.	0.2	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	IN	15:48	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/17/75	DI	15:54	4	F	-9999.	0.2	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	10:14	4	F	-9999.	0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	10:15	4	F	-9999.	0.8	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	11:13	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	11:17	4	F	-9999.	0.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	12:03	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	12:15	4	F	-9999.	0.6	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	IN	13:58	4	F	-9999.	0.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	13:58	4	F	-9999.	0.2	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/04/75	IN	23:57	3	F	-9999.	0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	00:15	3	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	02:09	3	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	02:27	3	T	-9999.	0.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	04:00	3	T	-9999.	-0.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	04:20	3	T	-9999.	-0.5	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	21:30	4	T	-9999.	0.4	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	21:40	4	T	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	IN	22:55	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/75	DI	22:57	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	00:19	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	00:33	4	T	-9999.	0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	01:38	4	T	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	01:42	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	03:00	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	03:03	4	T	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	04:10	4	T	-9999.	-0.3	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	04:16	4	T	-9999.	-0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	DI	21:45	4	T	-9999.	1.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	21:53	4	T	-9999.	0.9	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/05/75	DI	23:05	4	T	-9999.	0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/05/75	IN	23:09	4	T	-9999.	0.7	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:20	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	00:30	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	00:40	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	01:37	4	T	-9999.	0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	01:39	4	T	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	02:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	02:51	4	T	-9999.	0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	03:51	4	T	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	DI	03:53	4	T	-9999.	-0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/06/75	IN	04:46	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/06/75	DI	04:48	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	IN	21:55	4	T	-9999.	0.9	20.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/09/75	DI	21:57	4	T	-9999.	1.0	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/75	IN	22:05	4	T	-9999.	1.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/75	DI	22:02	4	T	-9999.	1.1	26.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	00:00	4	T	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	00:04	4	T	-9999.	0.9	21.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	DI	00:59	4	T	-9999.	0.8	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	01:00	4	T	-9999.	0.8	21.0	0	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14
06/10/75	DI	02:00	4	T	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	02:15	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	03:09	4	T	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	03:28	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	04:24	4	T	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	04:33	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:07	4	T	-9999.	1.1	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	22:10	4	T	-9999.	1.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	DI	22:32	4	T	-9999.	1.0	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	23:36	4	T	-9999.	1.0	21.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/11/75	DI	01:08	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	01:10	4	T	-9999.	0.8	21.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/11/75	DI	02:27	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	02:27	4	T	-9999.	0.5	21.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/11/75	IN	04:45	4	T	-9999.	0.1	21.5	0	0	22	0	22	0	22	0	22	0	22	0	22	0	22	0	22	0	22
06/11/75	DI	21:12	4	T	-9999.	0.3	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	21:25	4	T	-9999.	0.3	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	DI	22:33	4	T	-9999.	0.8	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	22:37	4	T	-9999.	0.8	21.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/11/75	DI	23:35	4	T	-9999.	1.0	26.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	IN	23:41	4	T	-9999.	1.0	21.0	0	1	24	0	25	0	25	0	25	0	25	0	25	0	25	0	25	0	25
06/12/75	IN	00:52	4	T	-9999.	1.0	21.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/12/75	DI	00:53	4	T	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/75	IN	01:50	4	T	-9999.	0.8	21.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	DI	01:53	4	T	-9999.	0.8	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	DI	02:53	4	T	-9999.	0.6	24.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	02:57	4	T	-9999.	0.6	21.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/10/75	DI	03:55	4	T	-9999.	0.3	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	04:03	4	T	-9999.	0.3	21.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/75	IN	21:13	4	T	-9999.	0.6	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	21:15	4	T	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	DI	22:12	4	T	-9999.	0.6	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/75	IN	22:16	4	T	-9999.	0.6	20.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/75	DI	23:12	4	T	-9999.	0.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/75	IN	23:14	4	T	-9999.	0.9	21.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/11/75	DI	00:21	4	T	-9999.	11.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/75	IN	00:40	4	T	-9999.	1.1	20.5	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/11/75	DI	00:31	4	T	-9999.	1.1	24.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/11/75	IN	00:45	5	T	-9999.	1.1	20.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/11/75	DI	02:25	4	T	-9999.	1.1	23.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/13/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/13/75	IN	03:11	4	T	-9999.	1.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	DI	03:15	4	T	-9999.	0.9	23.5	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/13/75	DI	04:00	4	T	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/13/75	IN	04:12	4	T	-9999.	0.7	20.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/16/75	IN	21:19	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	21:13	4	T	-9999.	0.2	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	DI	22:12	4	T	-9999.	0.0	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	22:29	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/75	IN	23:10	4	T	-9999.	-0.1	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/75	DI	23:11	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:00	4	T	-9999.	0.1	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	00:06	4	T	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	00:59	4	T	-9999.	0.2	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	01:11	4	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	DI	00:17	4	T	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	03:08	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	03:45	4	T	-9999.	0.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	04:00	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:01	4	T	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	21:05	4	T	-9999.	0.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:15	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:25	4	T	-9999.	0.2	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:16	4	T	-9999.	-0.1	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:35	4	T	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:14	4	T	-9999.	-0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	00:18	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:00	4	T	-9999.	-0.2	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	DI	01:11	4	T	-9999.	-0.2	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:53	4	T	-9999.	0.0	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	DI	02:09	4	T	-9999.	0.0	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:45	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:58	4	T	-9999.	0.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:45	4	T	-9999.	0.5	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/18/75	DI	04:45	4	T	-9999.	0.5	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:05	4	T	-9999.	0.6	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	21:14	4	T	-9999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:57	4	T	-9999.	0.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:01	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:36	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:46	4	T	-9999.	0.3	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:31	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:47	4	T	-9999.	0.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:25	4	T	-9999.	0.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:25	4	T	-9999.	0.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:06	4	T	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:11	4	T	-9999.	-0.1	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/75	DI	23:47	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	00:47	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	01:32	4	T	-9999.	0.7	25.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/75	IN	02:22	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	02:25	4	T	-9999.	0.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	03:12	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	03:27	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	04:10	4	T	-9999.	0.5	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	04:15	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	09:08	4	T	-9999.	-0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	09:15	4	T	-9999.	-0.2	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	10:06	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	10:45	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	10:57	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	12:26	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	13:16	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	12:12	4	T	-9999.	0.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/75	IN	14:15	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	14:20	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	IN	15:00	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	15:10	4	T	-9999.	0.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/75	DI	15:03	4	T	-9999.	0.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	10:10	4	T	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	10:25	4	T	-9999.	0.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/27/75	IN	11:14	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	11:20	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:08	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:10	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	12:50	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	12:58	4	T	-9999.	0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	13:45	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	13:49	4	T	-9999.	0.1	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	14:40	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	14:45	4	T	-9999.	0.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	15:35	4	T	-9999.	0.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	15:76	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	21:05	4	T	-9999.	0.2	34.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/28/75	IN	21:19	4	T	-9999.	0.2	22.5	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/29/75	DI	22:01	4	T	-9999.	0.2	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/75	IN	22:17	4	T	-9999.	0.2	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/75	IN	22:58	4	T	-9999.	0.1	22.5	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/30/75	DI	23:05	4	T	-9999.	0.1	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/30/75	IN	23:49	4	T	-9999.	0.2	22.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/30/75	DI	23:55	4	T	-9999.	0.1	34.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	IN	00:45	4	T	-9999.	0.4	22.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/75	DI	00:50	4	T	-9999.	0.4	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	01:41	4	T	-9999.	0.5	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	01:47	4	T	-9999.	0.5	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	02:25	4	T	-9999.	0.6	22.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/01/75	DI	02:30	4	T	-9999.	0.6	28.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	03:16	4	T	-9999.	0.7	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/75	DI	03:22	4	T	-9999.	0.8	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	IN	04:09	4	T	-9999.	0.8	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	04:00	4	T	-9999.	0.8	28.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/06/75	IN	21:20	4	T	-9999.	0.5	22.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/75	DI	21:32	4	T	-9999.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:06	4	T	-9999.	0.9	22.0	2	0	7	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/01/75	IN	22:15	4	T	-9999.	0.9	22.0	0	4	14	0	18	0	18	0	18	0	18	0	18	0	18	0	18
07/01/75	DI	23:16	4	T	-9999.	0.1	24.7	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/02/75	IN	00:13	4	T	-9999.	0.2	22.0	0	3	25	0	28	0	28	0	28	0	28	0	28	0	28	0	28
07/02/75	DI	00:11	4	T	-9999.	0.2	21.5	0	1	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/02/75	IN	01:06	4	T	-9999.	0.3	22.0	1	0	12	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/02/75	DI	01:08	4	T	-9999.	0.3	28.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/75	DI	02:09	4	T	-9999.	0.5	28.5	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (MMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/75	IN	02:14	4	T	-9999.	0.5	22.0	0	3	12	0	15	0	15	0	15	0	15	0	15	0	15	0	15
07/02/75	IN	03:11	4	T	-9999.	0.6	22.0	0	3	11	0	14	0	14	0	14	0	14	0	14	0	14	0	14
07/02/75	DI	03:12	4	T	-9999.	0.6	28.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/02/75	IN	04:11	4	T	-9999.	0.7	21.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/02/75	DI	04:11	4	T	-9999.	0.8	28.0	0	2	12	0	14	0	14	0	14	0	14	0	14	0	14	0	14
07/02/75	DI	09:13	4	T	-9999.	0.2	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/03/75	IN	09:16	4	T	-9999.	0.2	22.3	0	2	5	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/03/75	IN	10:03	4	T	-9999.	0.0	22.9	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/03/75	DI	10:09	4	T	-9999.	0.0	24.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/03/75	IN	11:01	4	T	-9999.	-0.2	25.5	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/03/75	IN	11:59	4	T	-9999.	-0.2	25.5	0	1	10	0	11	0	11	0	11	0	11	0	11	0	11	0	11
07/03/75	DI	11:59	4	T	-9999.	-0.2	24.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/03/75	IN	12:51	4	T	-9999.	-0.2	25.5	0	1	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/03/75	DI	12:58	4	T	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/75	DI	17:54	4	T	-9999.	-0.1	24.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/03/75	IN	13:56	4	T	-9999.	-0.1	25.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/03/75	IN	14:46	4	T	-9999.	0.2	25.5	0	3	9	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/03/75	DI	14:54	4	T	-9999.	0.2	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/03/75	IN	15:45	4	T	-9999.	0.5	26.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/03/75	DI	15:46	4	T	-9999.	0.5	24.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/06/75	IN	21:05	4	T	-9999.	1.1	25.9	2	6	35	1	42	1	42	1	42	1	42	0	43	0	43	0	43
07/07/75	DI	21:05	4	T	-9999.	1.1	25.0	0	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
07/07/75	IN	22:11	4	T	-9999.	1.1	26.0	0	4	68	0	72	0	72	0	72	0	72	0	72	0	72	0	72
07/07/75	DI	22:23	4	T	-9999.	1.1	24.0	0	0	17	0	17	0	17	0	17	0	17	0	17	0	17	0	17
07/07/75	IN	23:38	4	T	-9999.	0.8	25.0	0	5	67	0	72	0	72	0	72	0	72	0	72	0	72	0	72
07/07/75	DI	23:39	4	T	-9999.	0.8	30.5	0	1	16	0	17	0	17	0	17	0	17	0	17	0	17	0	17
07/08/75	IN	01:00	4	T	-9999.	0.5	25.0	0	4	70	0	74	0	74	0	74	0	74	0	74	0	74	0	74
07/08/75	DI	01:05	4	T	-9999.	0.5	30.0	0	1	12	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/08/75	DI	02:05	4	T	-9999.	0.2	28.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/08/75	IN	02:11	4	T	-9999.	0.2	25.0	0	5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/08/75	DI	02:54	4	T	-9999.	0.1	28.5	0	5	21	0	26	0	26	0	26	0	26	0	26	0	26	0	26
07/08/75	IN	02:56	4	T	-9999.	0.1	25.5	0	1	24	0	25	0	25	0	25	0	25	0	25	0	25	0	25

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

DATE	ST	TIME	P	M	COND. (MMHOS)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/09/75	DI	02:54	4	T	-9999.	-0.1	28.5	0	1	28	0	29	0	29	0	29	0	29	0	29	0	29	0	29
07/09/75	IN	03:56	4	T	-9999.	-0.1	25.0	1	1	29	0	31	0	31	0	31	0	31	0	31	0	31	0	31
07/08/75	IN	21:25	4	T	-9999.	1.0	25.0	0	9	22	0	31	0	31	0	31	0	31	0	31	0	31	0	31
07/08/75	DI	21:31	4	T	-9999.	1.0	35.0	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/08/75	IN	22:25	4	T	-9999.	1.0	26.0	1	2	41	0	44	0	44	0	44	0	44	0	44	0	44	0	44
07/08/75	DI	22:37	4	T	-9999.	1.1	34.0	0	0	17	0	17	0	17	0	17	0	17	0	17	0	17	0	17
07/08/75	IN	23:40	4	T	-9999.	1.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/75	DI	00:42	4	T	-9999.	1.0	34.0	0	1	25	0	26	0	26	0	26	0	26	0	26	0	26	0	26
07/09/75	DI	00:45	4	T	-9999.	0.8	34.0	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/09/75	IN	00:56	4	T	-9999.	0.7	26.0	0	0	26	0	26	0	26	0	26	0	26	0	26	0	26	0	26
07/09/75	IN	01:40	4	T	-9999.	0.5	26.0	0	0	58	0	58	0	58	0	58	0	58	0	58	0	58	0	58
07/09/75	DI	01:57	4	T	-9999.	0.5	34.0	0	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15
07/09/75	DI	02:50	4	T	-9999.	0.2	34.5	0	0	19	0	19	0	19	0	19	0	19	0	19	0	19	0	19
07/09/75	IN	02:59	4	T	-9999.	0.2	25.5	0	1	94	0	95	0	95	0	95	0	95	0	95	0	95	0	95
07/09/75	IN	04:49	4	T	-9999.	0.0	25.5	0	2	114	0	116	0	116	0	116	0	116	0	116	0	116	0	116
07/09/75	DI	05:56	4	T	-9999.	0.0	34.5	0	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40
07/10/75	DI	09:12	4	T	-9999.	0.5	35.0	0	0	46	0	46	0	46	0	46	0	46	0	46	0	46	0	46
07/10/75	IN	09:14	4	T	-9999.	0.5	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/10/75	DI	10:14	4	T	-9999.	0.8	35.0	0	0	31	0	31	0	31	0	31	0	31	0	31	0	31	0	31
07/10/75	IN	10:15	4	T	-9999.	0.8	26.0	0	1	24	0	25	0	25	0	25	0	25	0	25	0	25	0	25
07/10/75	IN	11:29	4	T	-9999.	0.9	25.5	0	0	18	0	18	0	18	0	18	0	18	0	18	0	18	0	18
07/10/75	DI	11:54	4	T	-9999.	0.9	35.0	0	0	88	0	88	0	88	0	88	0	88	0	88	0	88	0	88
07/10/75	IN	12:50	5	T	-9999.	0.9	25.5	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/10/75	DI	13:04	4	T	-9999.	0.9	36.0	0	0	76	0	76	0	76	0	76	0	76	0	76	0	76	0	76
07/10/75	DI	14:09	4	T	-9999.	0.8	36.0	0	0	43	0	43	0	43	0	43	0	43	0	43	0	43	0	43
07/10/75	IN	14:18	4	T	-9999.	0.8	25.5	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/10/75	DI	15:50	4	T	-9999.	0.0	36.5	0	0	37	0	37	0	37	0	37	0	37	0	37	0	37	0	37
07/10/75	IN	16:05	4	T	-9999.	0.0	25.5	2	10	98	12	98	12	98	12	98	12	98	0	110	0	110	0	110
07/10/75	IN	99:03	4	T	-9999.	0.2	25.5	1	2	26	1	28	1	28	1	28	1	28	0	29	0	29	0	29
07/11/75	DI	09:15	4	T	-9999.	0.2	35.0	0	0	33	0	33	0	33	0	33	0	33	0	33	0	33	0	33
07/11/75	IN	10:30	4	T	-9999.	0.6	26.0	0	3	33	0	36	0	36	0	36	0	36	0	36	0	36	0	36
07/11/75	DI	10:45	4	T	-9999.	0.6	35.0	0	0	57	0	57	0	57	0	57	0	57	0	57	0	57	0	57

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/11/75	DI	11:55	4	T	-9999.	0.9	35.0	0	0	92	0	92	0	92	0	92	0	92	0	92	0	92	0	92
07/11/75	IN	12:04	4	T	-9999.	0.9	26.0	1	15	64	0	80	0	80	0	80	0	80	0	80	0	80	0	80
07/11/75	IN	13:15	4	T	-9999.	0.9	26.0	0	7	89	0	96	0	96	0	96	0	96	0	96	0	96	0	96
07/11/75	DI	13:30	4	T	-9999.	0.9	35.5	0	0	53	0	53	0	53	0	53	0	53	0	53	0	53	0	53
07/11/75	DI	14:40	4	T	-9999.	0.7	35.5	0	0	46	0	46	0	46	0	46	0	46	0	46	0	46	0	46
07/11/75	IN	14:54	4	T	-9999.	0.7	26.0	0	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
07/11/75	DI	15:09	4	T	-9999.	0.3	35.5	0	0	37	0	37	0	37	0	37	0	37	0	37	0	37	0	37
07/11/75	IN	15:19	4	T	-9999.	0.3	26.0	0	7	90	0	97	0	97	0	97	0	97	0	97	0	97	0	97
07/14/75	IN	09:43	4	T	-9999.	-0.2	25.5	0	2	14	0	16	0	16	0	16	0	16	0	16	0	16	0	16
07/14/75	DI	10:01	4	T	-9999.	-0.2	35.0	0	0	36	0	36	0	36	0	36	0	36	0	36	0	36	0	36
07/14/75	IN	11:17	4	T	-9999.	-0.2	25.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/14/75	DI	11:18	4	T	-9999.	-0.2	35.0	0	0	28	0	28	0	28	0	28	0	28	0	28	0	28	0	28
07/14/75	DI	14:50	4	T	-9999.	0.9	34.0	0	0	37	0	37	0	37	0	37	0	37	0	37	0	37	0	37
07/14/75	IN	14:52	4	T	-9999.	0.9	26.0	0	2	24	0	26	0	26	0	26	0	26	0	26	0	26	0	26
07/14/75	IN	16:15	4	T	-9999.	0.8	25.5	0	0	37	0	37	0	37	0	37	0	37	0	37	0	37	0	37
07/14/75	DI	16:20	4	T	-9999.	0.8	31.0	0	0	64	0	64	0	64	0	64	0	64	0	64	0	64	0	64
07/17/75	IN	13:66	4	T	-9999.	-0.3	26.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/17/75	DI	13:16	4	T	-9999.	-0.3	35.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/17/75	IN	14:03	4	T	-9999.	-0.1	26.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/17/75	DI	14:05	4	F	-9999.	-0.1	36.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/17/75	IN	14:45	4	T	-9999.	0.2	26.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/17/75	DI	15:04	4	F	-9999.	0.2	35.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/17/75	IN	15:48	4	T	-9999.	0.2	26.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/17/75	DI	15:54	4	F	-9999.	0.2	35.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/22/75	IN	10:14	4	F	-9999.	0.8	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/75	DI	10:15	4	F	-9999.	0.8	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/75	IN	11:13	4	F	-9999.	0.9	27.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/22/75	DI	11:17	4	F	-9999.	0.9	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/75	IN	12:08	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	12:15	4	F	-9999.	0.6	36.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/22/75	IN	13:58	4	F	-9999.	0.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/75	DI	13:58	4	F	-9999.	0.2	36.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- (A=ALIVE) S=STUNNED) D=DEAD)

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE) IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
9/22/75	IN	14:45	4	F	-9999.	0.0	27.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
9/22/75	DI	14:58	4	F	-9999.	0.0	36.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
9/22/75	IN	15:48	4	F	-9999.	-0.2	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
9/22/75	DI	15:58	4	F	-9999.	-0.2	36.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
9/23/75	IN	09:31	4	F	-9999.	-0.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/23/75	DI	09:20	4	F	-9999.	0.2	35.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
9/23/75	IN	10:00	4	F	-9999.	0.4	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
9/23/75	DI	10:07	4	F	-9999.	0.4	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY JUVENILES/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/27/75	IN	14:40	4	T	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	14:45	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	DI	15:35	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/27/75	IN	15:45	4	T	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	21:05	4	T	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	21:10	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	DI	22:01	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/75	IN	22:17	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	22:58	4	T	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:05	4	T	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	IN	23:49	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/75	DI	23:55	4	T	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	00:45	4	T	-9999.	0.4	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	00:55	4	T	-9999.	0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	01:41	4	T	-9999.	0.5	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/75	DI	01:47	4	T	-9999.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	02:25	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	02:35	4	T	-9999.	0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	03:16	4	T	-9999.	0.7	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	03:22	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	04:09	4	T	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	04:09	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	21:20	4	T	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	DI	21:47	4	T	-9999.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/75	IN	22:30	4	T	-9999.	0.9	22.0	1	2	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/01/75	IN	23:15	4	T	-9999.	0.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/75	DI	23:16	4	T	-9999.	0.1	23.7	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/02/75	IN	00:11	4	T	-9999.	0.2	22.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/02/75	DI	00:11	4	T	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	IN	01:07	4	T	-9999.	0.3	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	01:08	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/75	DI	02:09	4	T	-9999.	0.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY JUVENILES/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (MMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/75	IN	02:14	4	T	-9999.	0.5	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	03:11	4	T	-9999.	0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	03:37	4	T	-9999.	0.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	04:11	4	T	-9999.	0.7	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	04:11	4	T	-9999.	0.8	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/75	DI	09:13	4	T	-9999.	0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	09:16	4	T	-9999.	0.2	22.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	10:03	4	T	-9999.	0.0	22.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	10:09	4	T	-9999.	0.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	11:01	4	T	-9999.	-0.2	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	IN	11:52	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	11:56	4	T	-9999.	-0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	12:50	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	12:56	4	T	-9999.	-0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	13:50	4	T	-9999.	-0.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	13:51	4	T	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	14:46	4	T	-9999.	0.2	25.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/75	DI	14:51	4	T	-9999.	0.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	15:45	4	T	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	15:46	4	T	-9999.	0.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	IN	21:05	4	T	-9999.	1.1	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/75	DI	21:06	4	T	-9999.	1.1	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	IN	22:11	4	T	-9999.	1.1	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/75	DI	22:25	4	T	-9999.	1.1	33.0	2	2	3	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/07/75	IN	23:38	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	22:39	4	T	-9999.	0.8	30.5	2	2	0	2	2	1	3	0	4	0	4	0	4	0	4	0	4
07/08/75	IN	01:00	4	T	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	01:05	4	T	-9999.	0.5	30.0	1	4	3	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/08/75	DI	02:05	4	T	-9999.	0.2	28.5	0	5	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/08/75	IN	02:11	4	T	-9999.	0.2	25.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/08/75	DI	02:54	4	T	-9999.	0.1	28.5	7	7	5	2	17	1	18	0	19	0	19	0	19	0	19	0	19
07/08/75	IN	02:56	4	T	-9999.	0.1	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY JUVENILES/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/75	DI	00:54	4	T	-9999.	-0.1	28.5	6	6	3	2	13	1	14	0	15	0	15	0	15	0	15	0	15
07/08/75	IN	00:56	4	T	-9999.	-0.1	25.0	4	0	1	3	2	0	5	0	5	0	5	0	5	0	5	0	5
07/08/75	IN	21:25	4	T	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/75	DI	21:31	4	T	-9999.	1.0	35.0	0	1	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/08/75	IN	22:25	4	T	-9999.	1.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	DI	22:37	4	T	-9999.	1.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/75	IN	23:40	4	T	-9999.	1.0	26.0	1	0	39	1	39	1	39	1	39	0	40	0	40	0	40	0	40
07/09/75	DI	24:42	4	T	-9999.	1.0	34.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/09/75	DI	00:45	4	T	-9999.	0.8	34.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/09/75	IN	00:50	4	T	-9999.	0.7	26.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/09/75	IN	01:40	4	T	-9999.	0.5	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/75	DI	01:57	4	T	-9999.	0.5	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/09/75	DI	02:50	4	T	-9999.	0.2	34.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/09/75	IN	02:59	4	T	-9999.	0.2	25.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/09/75	IN	03:40	4	T	-9999.	0.0	25.5	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/09/75	DI	03:56	4	T	-9999.	0.0	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	09:12	4	T	-9999.	0.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	09:14	4	T	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	10:14	4	T	-9999.	0.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	10:15	4	T	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	11:37	4	T	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	11:54	4	T	-9999.	0.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	12:50	5	T	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	13:04	4	T	-9999.	0.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	14:09	4	T	-9999.	0.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	14:18	4	T	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	DI	15:50	4	T	-9999.	0.0	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/10/75	IN	16:05	4	T	-9999.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	09:44	4	T	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	09:15	4	T	-9999.	0.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	IN	10:38	4	T	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/11/75	DI	10:45	4	T	-9999.	0.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--BAY ANCHOVY JUVENILES/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHOS)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/11/75	DI	11:05	4	T	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	IN	12:04	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	IN	13:10	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	DI	13:20	4	T	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	DI	14:40	4	T	-9999.	0.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	IN	14:54	4	T	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	DI	15:04	4	T	-9999.	0.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/11/75	IN	15:19	4	T	-9999.	0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	IN	09:43	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	DI	10:01	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	IN	11:17	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	DI	11:38	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	DI	14:00	4	T	-9999.	0.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
04/14/75	IN	14:50	4	T	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	IN	16:15	4	T	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/14/75	DI	16:20	4	T	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	IN	13:06	4	T	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	DI	13:16	4	T	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	IN	14:06	4	T	-9999.	-0.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	DI	14:05	4	F	-9999.	-0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	IN	14:45	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	DI	15:04	4	F	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	IN	15:48	4	T	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/17/75	DI	15:54	4	F	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	IN	10:14	4	F	-9999.	0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	DI	10:35	4	F	-9999.	0.8	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	IN	11:12	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	DI	11:17	4	F	-9999.	0.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	IN	12:08	4	F	-9999.	0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	DI	12:15	4	F	-9999.	0.6	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	IN	13:58	4	F	-9999.	0.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/75	DI	13:58	4	F	-9999.	0.2	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--ATLANTIC TOMCOD JUVENILES/ADULTS

								NUMBER OF INDIVIDUALS																	
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHOS)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/19/75	IN	00:02	4	T	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	DI	03:06	4	T	-9999.	-2.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	DI	03:48	4	T	-9999.	-4.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	IN	03:49	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	IN	21:47	4	T	-9999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	IN	22:08	4	T	-9999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	IN	22:59	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	DI	2X:03	4	T	-9999.	0.4	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/19/75	IN	22:26	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	IN	00:06	4	T	-9999.	0.2	24.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
04/20/75	DI	00:15	4	T	-9999.	0.2	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	DI	00:56	4	T	-9999.	0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	IN	00:58	4	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	IN	01:37	4	T	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	DI	01:40	4	T	-9999.	-0.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/20/75	IN	22:14	4	T	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/23/75	IN	22:45	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/23/75	IN	23:47	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	00:XX	4	T	-9999.	0.8	XX.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	00:43	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	00:XX	4	T	-9999.	0.8	XX.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	00:36	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	00:42	4	T	-9999.	0.8	XX.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	00:XX	4	T	-9999.	0.2	25.0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
04/24/75	DI	00:XX	4	T	-9999.	0.2	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	00:05	4	T	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	04:12	4	T	-9999.	-0.2	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	21:44	4	T	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	21:49	4	T	-9999.	-0.2	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	22:37	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	DI	22:49	4	T	-9999.	0.8	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/24/75	IN	2X:37	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY-- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS-- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
04/11/75	IN	24:57	3	F	-9999.	0.2	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/14/75	DI	04:15	3	T	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	DI	02:05	3	T	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	IN	02:27	3	T	-9999.	0.1	20.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/14/75	DI	04:00	3	T	-9999.	-0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/14/75	IN	04:20	3	T	-9999.	-0.5	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/75	DI	21:26	4	T	-9999.	0.4	21.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/75	IN	21:40	4	T	-9999.	0.4	21.0	1	2	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/14/75	IN	22:50	4	T	-9999.	0.3	21.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/14/75	DI	23:54	4	T	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	00:14	4	T	-9999.	0.1	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/75	DI	00:32	4	T	-9999.	0.1	24.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/75	IN	01:03	4	T	-9999.	0.1	21.0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/75	DI	01:42	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	01:00	4	T	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	01:44	4	T	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	IN	04:10	4	T	-9999.	-0.2	20.5	2	0	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/14/75	DI	04:30	4	T	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/75	DI	21:45	4	T	-9999.	0.0	26.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
08/14/75	IN	22:54	4	T	-9999.	0.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/14/75	DI	23:45	4	T	-9999.	0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/14/75	IN	23:59	4	T	-9999.	0.7	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/14/75	DI	00:20	4	T	-9999.	0.4	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10/15/75	DI	00:30	4	T	-9999.	0.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/15/75	IN	04:30	4	T	-9999.	0.4	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/15/75	IN	01:27	4	T	-9999.	0.3	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	DI	01:30	4	T	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/75	DI	02:42	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	IN	02:51	4	T	-9999.	0.2	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/75	IN	03:54	4	T	-9999.	-0.2	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
10/15/75	DI	02:53	4	T	-9999.	-0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/75	IN	04:40	4	T	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL ; T=THROTTLED)

ST=STATION: DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHOS)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/09/75	DI	04:48	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	IN	21:50	4	T	-9999.	0.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	21:57	4	T	-9999.	1.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	22:05	4	T	-9999.	1.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/09/75	DI	23:02	4	T	-9999.	1.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	00:00	4	T	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	00:04	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	00:58	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	01:04	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	02:00	4	T	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	02:15	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	03:03	4	T	-9999.	-9.9	23.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/10/75	IN	03:20	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	04:24	4	T	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/10/75	IN	04:32	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	IN	22:47	4	T	-9999.	1.1	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/10/75	DI	22:10	4	T	-9999.	1.1	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/11/75	DI	23:32	4	T	-9999.	1.0	21.5	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/10/75	IN	23:36	4	T	-9999.	1.0	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/11/75	DI	00:08	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	00:10	4	T	-9999.	0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	02:27	4	T	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	02:27	4	T	-9999.	0.5	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	05:45	4	T	-9999.	0.1	21.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/11/75	DI	21:19	4	T	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	21:25	4	T	-9999.	0.2	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	22:33	4	T	-9999.	0.8	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/11/75	IN	22:37	4	T	-9999.	0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	DI	23:35	4	T	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/11/75	IN	23:41	4	T	-9999.	1.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/12/75	IN	00:52	4	T	-9999.	1.0	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/12/75	DI	00:58	4	T	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL ; T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/19/75	IN	01:01	4	T	-9999.	0.8	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	01:53	4	T	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	02:53	4	T	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	02:57	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	03:50	4	T	-9999.	0.3	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
05/19/75	IN	04:00	4	T	-9999.	0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	21:13	4	T	-9999.	0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	21:55	4	T	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	22:02	4	T	-9999.	0.6	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	22:16	4	T	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	22:12	4	T	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	22:14	4	T	-9999.	0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	00:20	4	T	-9999.	11.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	00:30	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	01:31	4	T	-9999.	1.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	01:35	5	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	02:25	4	T	-9999.	1.1	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	02:27	4	T	-9999.	1.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	03:11	4	T	-9999.	1.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	03:15	4	T	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	04:00	4	T	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	04:12	4	T	-9999.	0.7	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	21:12	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	21:13	4	T	-9999.	0.2	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	DI	22:12	4	T	-9999.	0.0	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/75	IN	22:20	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/75	IN	20:10	4	T	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/75	DI	20:11	4	T	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:01	4	T	-9999.	0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	00:06	4	T	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	IN	00:59	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/17/75	DI	01:11	4	T	-9999.	0.2	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2

VIABILITY- I=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(T=TOTAL - I=INDIVIDUAL)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/75	DI	02:17	4	T	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	03:08	4	T	-9999.	0.6	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	03:15	4	T	-9999.	0.6	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/75	DI	04:00	4	T	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	04:01	4	T	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	20:25	4	T	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	22:35	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	22:25	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	DI	23:16	4	T	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/75	IN	23:35	4	T	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	00:14	4	T	-9999.	-0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	00:36	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:00	4	T	-9999.	-0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	01:11	4	T	-9999.	-0.2	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	01:52	4	T	-9999.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:02	4	T	-9999.	0.0	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	02:45	4	T	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	02:50	4	T	-9999.	0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	03:45	4	T	-9999.	0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	03:45	4	T	-9999.	0.5	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:06	4	T	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	21:14	4	T	-9999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	21:57	4	T	-9999.	0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:01	4	T	-9999.	0.4	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	22:36	4	T	-9999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	22:46	4	T	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	IN	23:31	4	T	-9999.	0.2	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/75	DI	23:42	4	T	-9999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	02:25	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	00:25	4	T	-9999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	00:36	4	T	-9999.	-0.1	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/19/75	DI	00:11	4	T	-9999.	-0.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY: A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--CLUPEIDAE LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/19/75	IN	03:09	4	T	-49999.	0.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:14	4	T	-49999.	-0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	DI	03:49	4	T	-99999.	-0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	03:49	4	T	-49999.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	21:17	4	T	-49999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	22:09	4	T	-49999.	0.6	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	22:50	4	T	-49999.	0.4	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/19/75	DI	22:54	4	T	-49999.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/19/75	IN	23:20	4	T	-99999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:06	4	T	-99999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:45	4	T	-99999.	0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	00:56	4	T	-99999.	0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	00:58	4	T	-49999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	IN	01:37	4	T	-99999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/20/75	DI	01:40	4	T	-99999.	-0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:14	4	T	-99999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:45	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/75	IN	23:47	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:03	4	T	-99999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	00:43	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	00:52	4	T	-99999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	01:25	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	01:42	4	T	-99999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	02:22	4	T	-99999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	02:30	4	T	-99999.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	03:05	4	T	-99999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	04:12	4	T	-99999.	-0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	21:46	4	T	-99999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	21:49	4	T	-99999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	22:37	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	DI	22:48	4	T	-99999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/75	IN	23:07	4	T	-99999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ACTIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED)

ST=STATION: DI=DISCHARGE; IN=INTAKE

2. Entrainment Survival Expressed as Abundance (Density) Raw Data Summaries

2.1 ROSETON GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975

WHITE PERCH DENSITY

(A) STATION	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/23/75	21:50	7.12	0.0	0.0	0.0	0.0	0.0
D	05/23/75	21:49	7.84	0.0	0.0	0.0	0.0	0.0
I	05/23/75	23:27	7.75	0.0	0.0	0.0	0.0	0 0
D	05/23/75	23:25	8.30	0.0	0.0	120.5	0.0	120.5
I	05/29/75	00:41	8.48	0.0	117.9	117.9	0.0	235.8
D	05/29/75	00:33	8.33	0.0	120.0	0.0	0.0	120.0
I	05/29/75	02:00	8.12	0.0	0.0	0.0	0.0	0.0
D	05/29/75	02:00	7.93	0.0	0.0	126.1	0.0	126.1
I	05/29/75	03:05	8.30	0.0	0.0	0.0	0.0	0.0
D	05/29/75	03:10	7.66	0.0	0.0	130.5	0.0	130.5
I	05/29/75	04:35	7.39	0.0	0.0	0.0	0.0	0.0
D	05/29/75	04:31	7.57	0.0	0.0	0.0	0.0	0.0
I	05/29/75	05:25	8.30	0.0	0.0	120.5	0.0	120.5
D	05/29/75	05:31	7.75	0.0	0.0	0.0	0.0	0.0
I	05/29/75	21:17	7.93	0.0	126.1	126.1	0.0	252.2
D	05/29/75	21:23	8.34	0.0	0.0	0.0	0.0	0.0
I	05/29/75	22:46	8.11	0.0	0.0	0.0	0.0	0.0
D	05/29/75	22:45	8.11	0.0	0.0	123.3	0.0	123.3
I	05/30/75	00:15	7.57	0.0	0.0	0.0	0.0	0.0
D	05/30/75	00:28	7.76	0.0	0.0	0.0	0.0	0.0
I	05/30/75	01:31	7.03	0.0	0.0	142.2	0.0	142.2
D	05/30/75	01:28	8.11	0.0	0.0	246.6	0.0	246.6
I	05/30/75	03:24	8.20	0.0	0.0	122.0	0.0	122.0
D	05/30/75	03:20	8.48	117.9	0.0	353.8	0.0	353.8
I	05/30/75	05:14	8.03	0.0	0.0	0.0	0.0	0.0
D	05/30/75	05:17	7.66	0.0	0.0	130.5	0.0	130.5
I	06/02/75	21:42	6.58	0.0	0.0	0.0	0.0	0.0
D	06/02/75	22:00	7.30	0.0	0.0	0.0	0.0	0.0
I	06/02/75	23:18	8.30	0.0	0.0	120.5	0.0	120.5
D	06/02/75	23:32	8.12	0.0	0.0	369.5	0.0	369.5
I	06/03/75	00:44	7.39	0.0	0.0	270.6	0.0	270.6

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/03/75	00:53	7.75	0.0	0.0	0.0	0.0	0.0
I	06/03/75	02:13	7.03	0.0	0.0	711.2	0.0	711.2
D	06/03/75	02:12	7.57	0.0	0.0	0.0	0.0	0.0
I	06/03/75	03:18	7.75	0.0	0.0	516.1	0.0	516.1
D	06/03/75	03:27	8.30	0.0	0.0	361.4	0.0	361.4
I	06/03/75	04:37	7.57	0.0	0.0	396.3	0.0	396.3
D	06/03/75	04:49	8.30	0.0	120.5	241.0	0.0	361.5
I	06/03/75	05:49	7.21	0.0	138.7	277.4	0.0	416.1
D	06/03/75	05:48	7.57	0.0	0.0	396.3	0.0	396.3
I	06/03/75	22:06	7.75	0.0	0.0	0.0	0.0	0.0
D	06/03/75	21:41	7.57	0.0	0.0	264.2	0.0	264.2
I	06/03/75	22:57	7.93	0.0	0.0	0.0	0.0	0.0
D	06/03/75	23:00	7.03	0.0	0.0	0.0	0.0	0.0
I	06/03/75	23:56	7.39	0.0	0.0	0.0	0.0	0.0
D	06/04/75	00:03	7.39	0.0	0.0	135.3	0.0	135.3
I	06/04/75	01:27	7.03	0.0	0.0	0.0	0.0	0.0
D	06/04/75	01:20	7.39	0.0	0.0	0.0	0.0	0.0
I	06/04/75	02:45	7.57	0.0	0.0	0.0	0.0	0.0
D	06/04/75	02:42	7.30	0.0	0.0	0.0	0.0	0.0
I	06/04/75	03:56	7.21	0.0	0.0	0.0	0.0	0.0
D	06/04/75	03:45	7.57	0.0	0.0	0.0	0.0	0.0
I	06/04/75	05:05	7.57	0.0	0.0	132.1	0.0	132.1
D	06/04/75	04:50	7.57	0.0	0.0	132.1	0.0	132.1
I	06/04/75	06:09	8.30	0.0	0.0	0.0	0.0	0.0
D	06/04/75	05:59	7.57	0.0	0.0	528.4	0.0	528.4
I	06/04/75	21:31	8.30	0.0	0.0	0.0	0.0	0.0
D	06/04/75	21:33	6.85	0.0	0.0	146.0	0.0	146.0
I	06/04/75	22:40	8.11	0.0	0.0	369.9	0.0	369.9
D	06/04/75	22:42	6.85	0.0	0.0	146.0	0.0	146.0
I	06/04/75	23:45	6.85	0.0	0.0	0.0	0.0	0.0
D	06/04/75	23:49	7.48	0.0	0.0	267.4	0.0	267.4

(A): I=INTAKE, D=DISCHARGE

WHITE PERCH DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I		06/05/75	00:45	7.21	0.0	0.0	0.0	0.0	0.0
D		06/05/75	00:50	6.94	0.0	0.0	432.3	0.0	432.3
I		06/05/75	01:57	6.85	0.0	0.0	0.0	0.0	0.0
D		06/05/75	02:01	7.39	0.0	0.0	0.0	0.0	0.0
I		06/05/75	03:15	8.48	0.0	0.0	0.0	0.0	0.0
D		06/05/75	03:05	6.85	0.0	146.0	146.0	0.0	292.0
I		06/05/75	04:25	7.57	0.0	0.0	132.1	0.0	132.1
D		06/05/75	04:25	7.57	0.0	0.0	132.1	0.0	132.1
I		06/05/75	05:20	6.85	0.0	0.0	0.0	0.0	0.0
D		06/05/75	05:25	7.66	0.0	0.0	130.5	0.0	130.5
I		06/05/75	21:40	7.93	0.0	0.0	0.0	0.0	0.0
D		06/05/75	21:46	7.75	0.0	0.0	0.0	0.0	0.0
I		06/05/75	22:50	7.21	0.0	0.0	0.0	0.0	0.0
D		06/05/75	22:46	6.85	0.0	0.0	146.0	0.0	146.0
I		06/05/75	23:50	7.21	0.0	0.0	0.0	0.0	0.0
D		06/05/75	23:41	7.84	0.0	0.0	0.0	0.0	0.0
I		06/06/75	01:05	7.39	0.0	0.0	676.6	0.0	676.6
D		06/05/75	00:50	6.85	0.0	0.0	0.0	0.0	0.0
I		06/06/75	02:07	7.93	0.0	0.0	252.2	126.1	378.3
D		06/06/75	02:01	6.85	0.0	0.0	292.0	0.0	292.0
I		06/06/75	03:19	7.57	0.0	0.0	0.0	0.0	0.0
D		06/06/75	03:07	7.03	0.0	0.0	0.0	0.0	0.0
I		06/05/75	04:20	6.85	0.0	0.0	0.0	0.0	0.0
D		06/07/75	04:17	7.84	0.0	0.0	127.6	0.0	127.6
I		06/09/75	22:00	7.39	0.0	0.0	270.6	0.0	270.6
D		06/09/75	21:50	7.30	0.0	0.0	137.0	0.0	137.0
I		06/09/75	23:00	7.57	0.0	0.0	0.0	0.0	0.0
D		06/09/75	22:58	7.39	0.0	0.0	270.6	0.0	270.6
I		06/09/75	23:59	8.11	0.0	0.0	123.3	0.0	123.3
D		06/10/75	00:04	7.75	0.0	0.0	258.0	0.0	258.0
I		06/10/75	01:00	8.11	0.0	0.0	123.3	0.0	123.3

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/10/75	01:07	8.20	0.0	0.0	0.0	0.0	0.0
I	06/10/75	02:14	7.57	0.0	0.0	132.1	0.0	132.1
D	06/10/75	02:21	8.03	0.0	0.0	124.5	0.0	124.5
I	06/10/75	03:38	8.48	0.0	0.0	1297.1	0.0	1297.1
D	06/10/75	03:32	7.12	0.0	0.0	842.6	0.0	842.6
I	06/10/75	04:57	8.48	0.0	0.0	707.6	0.0	707.6
D	06/10/75	05:01	7.03	0.0	0.0	568.9	0.0	568.9
I	06/10/75	05:54	7.39	0.0	0.0	406.0	0.0	406.0
D	06/10/75	06:02	7.03	0.0	0.0	426.7	0.0	426.7
I	06/10/75	21:35	7.75	0.0	0.0	0.0	0.0	0.0
D	06/10/75	21:45	8.11	0.0	0.0	123.3	0.0	123.3
I	06/10/75	22:45	7.57	0.0	0.0	132.1	0.0	132.1
D	06/10/75	22:48	7.75	0.0	0.0	258.1	0.0	258.1
I	06/10/75	23:50	7.39	0.0	0.0	135.3	0.0	135.3
D	06/10/75	23:52	7.75	0.0	0.0	129.0	0.0	129.0
I	06/11/75	00:50	8.30	0.0	0.0	120.5	0.0	120.5
D	06/11/75	00:45	6.94	0.0	0.0	0.0	0.0	0.0
I	06/11/75	01:52	8.30	0.0	0.0	120.5	0.0	120.5
D	06/11/75	01:52	8.11	0.0	0.0	0.0	0.0	0.0
I	06/11/75	02:45	8.30	0.0	0.0	120.5	0.0	120.5
D	06/11/75	02:48	7.93	0.0	0.0	126.1	0.0	126.1
I	06/11/75	03:46	7.57	0.0	0.0	264.2	0.0	264.2
D	06/11/75	03:48	6.85	0.0	0.0	729.9	0.0	729.9
I	06/11/75	04:43	6.85	0.0	0.0	730.0	0.0	730.0
D	06/11/75	04:49	7.39	0.0	0.0	947.2	0.0	947.2
I	06/11/75	05:57	7.94	0.0	0.0	251.8	0.0	251.8
D	06/11/75	05:56	7.21	0.0	0.0	277.4	0.0	277.4
I	06/11/75	21:30	7.21	0.0	0.0	138.7	0.0	138.7
D	06/11/75	21:39	7.93	0.0	0.0	0.0	0.0	0.0
I	06/11/75	22:30	7.12	0.0	0.0	140.4	0.0	140.4
D	06/11/75	22:23	8.48	0.0	0.0	353.8	0.0	353.8

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/11/75	23:22	6.85	0.0	0.0	438.0	0.0	438.0
D	06/11/75	23:26	7.75	0.0	0.0	516.1	0.0	516.1
I	06/12/75	00:31	8.48	0.0	0.0	0.0	0.0	0.0
D	06/12/75	00:27	7.93	0.0	0.0	126.1	0.0	126.1
I	06/12/75	01:28	8.30	0.0	0.0	0.0	0.0	0.0
D	06/12/75	01:47	7.57	0.0	0.0	132.1	0.0	132.1
I	06/12/75	02:43	7.57	0.0	0.0	0.0	0.0	0.0
D	06/12/75	02:46	8.11	0.0	0.0	0.0	0.0	0.0
I	06/12/75	03:37	7.57	0.0	0.0	132.1	0.0	132.1
D	06/12/75	03:42	8.30	0.0	0.0	0.0	0.0	0.0
I	06/12/75	04:35	7.57	0.0	0.0	132.1	0.0	132.1
D	06/12/75	04:40	8.30	0.0	0.0	120.5	0.0	120.5
I	06/12/75	05:46	7.21	0.0	0.0	0.0	0.0	0.0
D	06/12/75	05:38	7.39	0.0	0.0	0.0	0.0	0.0
I	06/12/75	21:37	7.84	0.0	0.0	0.0	0.0	0.0
D	06/12/75	21:45	7.39	0.0	0.0	0.0	0.0	0.0
I	06/12/75	22:30	8.39	0.0	0.0	119.2	0.0	119.2
D	06/12/75	22:34	7.03	0.0	0.0	0.0	0.0	0.0
I	06/12/75	23:29	8.21	0.0	0.0	0.0	0.0	0.0
D	06/12/75	23:18	7.21	0.0	0.0	277.4	0.0	277.4
I	06/13/75	00:15	6.66	0.0	0.0	150.2	0.0	150.2
D	06/13/75	00:18	7.56	0.0	0.0	132.3	0.0	132.3
I	06/13/75	01:14	7.02	0.0	0.0	142.5	0.0	142.5
D	06/13/75	01:18	7.92	0.0	0.0	0.0	0.0	0.0
I	06/13/75	02:14	7.20	0.0	0.0	277.8	0.0	277.8
D	06/13/75	02:18	7.56	0.0	0.0	132.3	0.0	132.3
I	06/13/75	03:15	7.74	0.0	0.0	0.0	0.0	0.0
D	06/13/75	03:20	7.56	0.0	0.0	396.8	0.0	396.8
I	06/13/75	04:12	7.56	0.0	0.0	0.0	0.0	0.0
D	06/13/75	04:26	7.20	0.0	0.0	138.9	0.0	138.9
I	06/13/75	05:21	6.75	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	05:26	7.28	0.0	0.0	277.8	0.0	277.8
I	06/16/75	21:44	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	21:56	6.84	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:53	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:56	7.56	0.0	0.0	0.0	132.3	132.3
I	06/16/75	23:54	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	23:55	8.28	0.0	0.0	0.0	120.8	120.8
I	06/17/75	00:42	7.56	0.0	0.0	0.0	0.0	0.0
D	06/17/75	00:47	6.84	0.0	0.0	0.0	0.0	0.0
I	06/17/75	01:36	7.20	0.0	0.0	0.0	0.0	0.0
D	06/17/75	01:44	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	02:33	7.20	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:36	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:38	8.28	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:43	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:33	8.01	0.0	0.0	0.0	0.0	0.0
D	06/17/75	04:35	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	05:22	7.20	0.0	0.0	0.0	0.0	0.0
D	06/17/75	05:25	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	21:37	8.73	0.0	0.0	0.0	0.0	0.0
D	06/17/75	21:36	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:29	8.19	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:33	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	23:14	7.83	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:18	8.10	0.0	0.0	123.5	0.0	123.5
I	06/18/75	00:12	7.20	0.0	0.0	0.0	0.0	0.0
D	06/18/75	00:17	8.10	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:09	7.20	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:11	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:59	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	02:05	7.56	0.0	0.0	132.3	0.0	132.3

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/18/75	02:59	7.11	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:00	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	03:49	7.56	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:50	8.28	0.0	0.0	0.0	0.0	0.0
I	06/18/75	04:39	8.28	0.0	0.0	0.0	0.0	0.0
D	06/18/75	04:40	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	05:23	8.46	0.0	0.0	0.0	0.0	0.0
D	06/18/75	05:25	7.20	0.0	0.0	0.0	0.0	0.0
I	06/18/75	06:15	7.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	06:10	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	21:35	7.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:33	7.02	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:31	8.19	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:30	7.02	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:26	7.92	0.0	0.0	0.0	0.0	0.0
D	06/18/75	23:31	7.02	0.0	0.0	142.5	0.0	142.5
I	06/19/75	00:20	6.84	0.0	0.0	0.0	0.0	0.0
D	06/19/75	00:22	7.74	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:07	7.74	0.0	0.0	129.2	0.0	129.2
D	06/19/75	01:13	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:56	7.56	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:58	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	02:50	6.84	0.0	0.0	0.0	0.0	0.0
D	06/19/75	02:57	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:48	7.92	0.0	0.0	0.0	0.0	0.0
D	06/19/75	04:02	7.56	0.0	0.0	0.0	0.0	0.0
I	06/19/75	04:54	8.10	0.0	0.0	0.0	0.0	0.0
D	06/19/75	05:00	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	05:45	8.19	0.0	0.0	0.0	0.0	0.0
D	06/19/75	05:50	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	21:31	8.46	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	21:33	7.38	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:20	8.28	0.0	0.0	0.0	0.0	0.0
D	06/19/75	22:20	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:59	7.65	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:03	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:48	7.56	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:54	6.84	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:43	7.63	0.0	0.0	0.0	0.0	0.0
D	06/29/75	00:39	8.28	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:26	7.56	0.0	0.0	0.0	0.0	0.0
D	06/20/75	01:22	8.19	0.0	0.0	0.0	0.0	0.0
I	06/20/75	02:21	7.20	0.0	0.0	0.0	0.0	0.0
D	06/20/75	02:25	8.10	0.0	0.0	123.5	0.0	123.5
I	06/20/75	03:06	7.02	0.0	0.0	0.0	0.0	0.0
D	06/20/75	03:10	7.56	0.0	0.0	0.0	0.0	0.0
I	06/23/75	21:37	7.20	0.0	0.0	138.9	0.0	138.9
D	06/23/75	21:41	8.37	0.0	0.0	119.5	0.0	119.5
I	06/23/75	22:26	8.46	0.0	0.0	118.2	0.0	118.2
D	06/23/75	22:41	7.02	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:12	7.83	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:14	7.56	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:57	7.56	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:03	7.38	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:41	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:43	7.38	0.0	0.0	135.5	0.0	135.5
I	06/24/75	01:25	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:28	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:03	7.11	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:05	7.92	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:41	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:41	7.74	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/24/75	03:21	7.20	0.0	0.0	0.0	0.0	0.0
D	06/24/75	03:24	7.02	0.0	0.0	0.0	0.0	0.0
I	06/24/75	04:13	7.02	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:34	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	05:23	7.02	0.0	0.0	0.0	0.0	0.0
D	06/24/75	05:20	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	06:04	6.93	0.0	0.0	0.0	0.0	0.0
D	06/24/75	06:03	7.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	21:26	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	21:29	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:09	8.10	0.0	0.0	123.5	0.0	123.5
D	06/24/75	22:11	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:52	8.28	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:52	7.83	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:32	8.28	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:34	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:21	8.46	0.0	0.0	0.0	0.0	0.0
D	06/25/75	00:14	8.28	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:02	7.74	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:01	7.38	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:43	7.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:49	7.92	0.0	0.0	126.3	0.0	126.3
I	06/25/75	02:34	7.83	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:33	8.28	0.0	0.0	120.8	120.8	241.6
I	06/25/75	03:14	7.20	0.0	0.0	138.9	0.0	138.9
D	06/25/75	03:12	7.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:54	7.20	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:53	7.74	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:38	6.93	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:34	7.11	0.0	0.0	0.0	0.0	0.0
I	06/25/75	05:14	7.20	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/25/75	05:18	7.74	0.0	0.0	258.4	129.2	387.6
I	06/25/75	06:01	7.20	0.0	0.0	0.0	0.0	0.0
D	06/25/75	06:06	8.28	0.0	0.0	0.0	0.0	0.0
I	06/25/75	21:41	7.11	0.0	0.0	0.0	0.0	0.0
D	06/25/75	21:37	7.20	0.0	0.0	0.0	0.0	0.0
I	06/25/75	22:32	7.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	22:29	7.20	0.0	0.0	0.0	0.0	0.0
I	06/25/75	23:16	8.46	0.0	0.0	0.0	0.0	0.0
D	06/25/75	23:16	8.28	0.0	0.0	0.0	0.0	0.0
I	06/26/75	00:10	8.10	0.0	0.0	0.0	0.0	0.0
D	06/26/75	00:11	8.28	0.0	0.0	0.0	0.0	0.0
I	06/26/75	01:00	8.46	0.0	0.0	0.0	0.0	0.0
D	06/26/75	00:59	7.20	0.0	0.0	0.0	0.0	0.0
I	06/26/75	01:48	7.92	0.0	0.0	0.0	0.0	0.0
D	06/27/75	01:49	7.74	0.0	0.0	0.0	0.0	0.0
I	06/26/75	02:33	7.74	0.0	0.0	0.0	0.0	0.0
D	06/26/75	02:34	7.38	0.0	0.0	0.0	0.0	0.0
I	06/26/75	03:18	7.92	0.0	0.0	0.0	0.0	0.0
D	06/26/75	03:21	7.38	0.0	0.0	0.0	0.0	0.0
I	06/26/75	04:02	7.20	0.0	0.0	0.0	0.0	0.0
D	06/26/75	04:09	7.38	0.0	0.0	135.5	0.0	135.5
I	06/26/75	04:51	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	04:51	7.74	0.0	0.0	129.2	0.0	129.2
I	06/26/75	05:40	7.20	0.0	0.0	0.0	0.0	0.0
D	06/26/75	05:42	7.20	0.0	0.0	0.0	0.0	0.0
I	06/26/75	21:34	7.20	0.0	0.0	0.0	0.0	0.0
D	06/26/75	21:36	6.84	0.0	0.0	0.0	0.0	0.0
I	06/26/75	22:20	8.46	0.0	0.0	0.0	0.0	0.0
D	06/26/75	22:20	7.38	0.0	0.0	0.0	0.0	0.0
I	06/26/75	23:10	7.02	0.0	0.0	0.0	0.0	0.0
D	06/26/75	23:07	7.20	0.0	0.0	138.9	0.0	138.9

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/26/75	23:50	7.92	0.0	0.0	0.0	0.0	0.0
D	06/26/75	23:53	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	00:30	8.01	0.0	0.0	0.0	0.0	0.0
D	06/27/75	00:35	8.28	0.0	0.0	0.0	0.0	0.0
I	06/27/75	01:22	7.74	0.0	0.0	0.0	0.0	0.0
D	06/27/75	01:29	8.10	0.0	0.0	0.0	0.0	0.0
I	06/27/75	02:10	7.83	0.0	0.0	0.0	0.0	0.0
D	06/27/75	02:18	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	02:00	8.19	0.0	0.0	0.0	0.0	0.0
D	06/27/75	03:02	7.93	0.0	0.0	0.0	0.0	0.0
I	06/27/75	03:45	7.83	0.0	0.0	0.0	0.0	0.0
D	06/27/75	03:52	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	04:30	7.74	0.0	0.0	0.0	0.0	0.0
D	06/27/75	04:34	7.74	0.0	0.0	0.0	0.0	0.0
I	06/27/75	05:20	6.84	0.0	0.0	0.0	0.0	0.0
D	06/27/75	05:24	7.74	0.0	0.0	0.0	0.0	0.0
I	06/30/75	20:33	7.92	0.0	0.0	0.0	0.0	0.0
D	06/30/75	20:45	7.92	0.0	0.0	126.3	0.0	126.3
I	06/30/75	21:27	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	21:26	8.38	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:14	8.10	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:14	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	23:01	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:00	7.92	0.0	0.0	0.0	0.0	0.0
I	06/30/75	23:48	8.10	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:46	8.28	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:30	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:30	7.02	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:16	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:20	7.29	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:06	8.28	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

(A) STATION	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/01/75	02:14	7.47	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:57	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:00	7.38	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:42	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:50	7.74	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:26	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	04:30	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:08	8.19	0.0	0.0	0.0	0.0	0.0
D	07/01/75	05:21	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:57	7.38	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:00	7.29	0.0	0.0	0.0	0.0	0.0
I	07/01/75	06:37	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:40	7.47	0.0	0.0	0.0	0.0	0.0
I	07/01/75	20:35	6.93	0.0	0.0	0.0	0.0	0.0
D	07/01/75	20:40	8.28	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:20	8.46	0.0	0.0	0.0	0.0	0.0
D	07/01/75	21:17	7.56	0.0	0.0	132.3	0.0	132.3
I	07/01/75	22:18	7.92	0.0	0.0	0.0	0.0	0.0
D	07/01/75	22:17	7.92	0.0	0.0	126.3	0.0	126.3
I	07/01/75	23:31	7.56	0.0	0.0	264.6	0.0	264.6
D	07/01/75	23:29	8.28	0.0	0.0	241.6	0.0	241.6
I	07/02/75	00:13	7.92	0.0	0.0	0.0	0.0	0.0
D	07/02/75	00:13	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:00	7.20	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:00	7.92	0.0	0.0	252.5	0.0	252.5
I	07/02/75	01:44	6.66	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:48	7.56	0.0	0.0	0.0	0.0	0.0
I	07/02/75	02:40	7.47	0.0	0.0	133.9	0.0	133.9
D	07/02/75	02:41	8.28	0.0	0.0	0.0	0.0	0.0
I	07/02/75	03:33	8.19	0.0	0.0	0.0	0.0	0.0
D	07/02/75	03:32	7.92	0.0	0.0	0.0	126.3	126.3

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/02/75	04:14	8.28	0.0	0.0	120.8	0.0	120.8
D	07/02/75	04:20	7.20	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:01	7.83	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:04	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:37	8.53	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:40	7.92	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:35	8.37	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:34	7.20	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:49	8.64	0.0	0.0	0.0	0.0	0.0
D	07/07/75	20:36	7.02	0.0	0.0	0.0	0.0	0.0
I	07/07/75	21:55	7.74	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:41	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:40	7.20	0.0	0.0	0.0	0.0	0.0
D	07/07/75	22:34	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:35	7.38	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:30	7.20	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:21	6.84	0.0	0.0	0.0	0.0	0.0
D	07/08/75	00:18	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:04	7.74	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:02	7.11	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:51	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:50	6.84	0.0	0.0	146.2	0.0	146.2
I	07/08/75	02:38	7.56	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:33	7.92	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:31	7.20	0.0	0.0	138.9	0.0	138.9
D	07/08/75	03:22	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	04:18	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:15	8.10	0.0	0.0	0.0	0.0	0.0
I	07/08/75	05:22	7.38	0.0	0.0	0.0	0.0	0.0
D	07/08/75	05:15	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:09	7.29	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/28/75	21:50	7.12	0.0	0.0	0.0	0.0	0.0
D	05/28/75	21:40	7.84	0.0	0.0	0.0	0.0	0.0
I	05/28/75	23:27	7.75	0.0	129.0	0.0	0.0	129.0
D	05/28/75	23:25	8.30	0.0	0.0	0.0	0.0	0.0
I	05/29/75	00:41	8.48	0.0	0.0	0.0	0.0	0.0
D	05/29/75	00:33	8.33	0.0	0.0	0.0	0.0	0.0
I	05/29/75	02:09	8.12	0.0	0.0	0.0	0.0	0.0
D	05/29/75	02:00	7.93	0.0	0.0	0.0	0.0	0.0
I	05/29/75	03:05	8.39	0.0	0.0	0.0	0.0	0.0
D	05/29/75	03:10	7.66	0.0	0.0	0.0	0.0	0.0
I	05/29/75	04:35	7.39	0.0	0.0	0.0	0.0	0.0
D	05/29/75	04:31	7.57	0.0	0.0	0.0	0.0	0.0
I	05/29/75	05:25	8.30	0.0	0.0	0.0	0.0	0.0
D	05/29/75	05:31	7.75	0.0	129.0	0.0	0.0	129.0
I	05/29/75	21:17	7.93	0.0	0.0	0.0	0.0	0.0
D	05/29/75	21:23	8.34	0.0	0.0	0.0	0.0	0.0
I	05/29/75	22:46	8.11	0.0	0.0	123.3	0.0	123.3
D	05/29/75	22:45	8.11	0.0	0.0	0.0	0.0	0.0
I	05/30/75	00:15	7.57	0.0	132.1	264.2	0.0	396.3
D	05/30/75	00:28	7.76	0.0	0.0	0.0	0.0	0.0
I	05/30/75	01:31	7.03	0.0	142.2	0.0	0.0	142.2
D	05/30/75	01:28	8.11	0.0	0.0	123.3	0.0	123.3
I	05/30/75	03:24	8.20	0.0	122.0	122.0	0.0	244.0
D	05/30/75	03:20	8.48	0.0	0.0	235.8	0.0	235.8
I	05/30/75	05:14	8.03	0.0	0.0	249.0	0.0	249.0
D	05/30/75	05:17	7.66	0.0	0.0	261.1	0.0	261.1
I	06/02/75	21:42	6.58	0.0	0.0	0.0	0.0	0.0
D	06/02/75	22:00	7.30	0.0	0.0	137.0	0.0	137.0
I	06/02/75	23:19	8.30	0.0	0.0	1084.4	0.0	1084.4
D	06/02/75	23:32	8.12	0.0	615.8	123.2	0.0	739.0
I	06/03/75	00:44	7.39	0.0	0.0	1353.2	0.0	1353.2

(A): I=INTAKE, D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/03/75	00:53	7.75	0.0	516.1	774.2	0.0	1290.3
I	06/03/75	02:13	7.03	0.0	0.0	426.7	0.0	426.7
D	06/03/75	02:12	7.57	0.0	0.0	660.5	0.0	660.5
I	06/03/75	03:18	7.75	0.0	0.0	387.1	0.0	387.1
D	06/03/75	03:27	8.30	0.0	120.5	0.0	0.0	120.5
I	06/03/75	04:37	7.57	0.0	0.0	132.1	0.0	132.1
D	06/03/75	04:49	8.30	0.0	241.0	963.9	0.0	1204.9
I	06/03/75	05:49	7.21	0.0	416.1	416.1	0.0	832.2
D	06/03/75	05:48	7.57	0.0	132.1	1321.0	0.0	1453.1
I	06/03/75	22:06	7.75	0.0	0.0	129.0	0.0	129.0
D	06/03/75	21:41	7.57	0.0	0.0	924.7	0.0	924.7
I	06/03/75	22:57	7.93	0.0	0.0	126.1	0.0	126.1
D	06/03/75	23:00	7.03	0.0	0.0	142.2	0.0	142.2
I	06/03/75	23:56	7.39	0.0	0.0	1488.5	0.0	1488.5
D	06/04/75	00:05	7.39	0.0	0.0	1217.8	0.0	1217.8
I	06/04/75	01:27	7.03	0.0	0.0	426.7	0.0	426.7
D	06/04/75	01:20	7.30	0.0	0.0	685.0	0.0	685.0
I	06/04/75	02:45	7.57	0.0	0.0	132.1	0.0	132.1
D	06/04/75	02:42	7.30	0.0	0.0	137.0	0.0	137.0
I	06/04/75	03:56	7.21	0.0	0.0	0.0	0.0	0.0
D	06/04/75	03:45	7.57	0.0	0.0	132.1	0.0	132.1
I	06/04/75	05:05	7.57	0.0	0.0	0.0	0.0	0.0
D	06/04/75	04:50	7.57	0.0	0.0	528.4	0.0	528.4
I	06/04/75	06:00	8.30	0.0	0.0	0.0	0.0	0.0
D	06/04/75	05:59	7.57	0.0	0.0	660.5	0.0	660.5
I	06/04/75	21:31	8.30	0.0	0.0	120.5	0.0	120.5
D	06/04/75	21:33	6.85	0.0	0.0	146.0	0.0	146.0
I	06/04/75	22:40	8.11	0.0	0.0	616.5	0.0	616.5
D	06/04/75	22:42	6.85	0.0	0.0	292.0	0.0	292.0
I	06/04/75	23:45	6.85	0.0	0.0	0.0	0.0	0.0
D	06/04/75	23:49	7.48	0.0	133.7	133.7	0.0	267.4

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/05/75	00:45	7.21	0.0	0.0	693.5	0.0	693.5
D	06/05/75	00:50	6.94	0.0	0.0	864.6	0.0	864.6
I	06/05/75	01:57	6.85	0.0	0.0	438.0	0.0	438.0
D	06/05/75	02:01	7.39	0.0	135.3	406.0	0.0	541.3
I	06/05/75	03:15	8.48	117.9	117.9	707.5	0.0	825.4
D	06/05/75	03:05	6.85	0.0	292.0	292.0	0.0	584.0
I	06/05/75	04:25	7.57	0.0	132.1	132.1	0.0	264.2
D	06/05/75	04:25	7.57	0.0	0.0	396.3	0.0	396.3
I	06/05/75	05:20	6.85	0.0	146.0	292.0	0.0	438.0
D	06/05/75	05:25	7.66	0.0	0.0	261.1	0.0	261.1
I	06/05/75	21:40	7.93	0.0	0.0	126.1	0.0	126.1
D	06/05/75	21:46	7.75	0.0	0.0	0.0	0.0	0.0
I	06/05/75	22:50	7.21	0.0	0.0	0.0	0.0	0.0
D	06/05/75	22:46	6.85	0.0	0.0	0.0	0.0	0.0
I	06/05/75	23:50	7.21	0.0	0.0	0.0	0.0	0.0
D	06/05/75	23:41	7.84	0.0	0.0	127.6	0.0	127.6
I	06/06/75	01:05	7.39	0.0	0.0	541.2	0.0	541.2
D	06/06/75	00:50	6.85	0.0	0.0	0.0	0.0	0.0
I	06/06/75	02:07	7.93	0.0	0.0	882.7	0.0	882.7
D	06/06/75	02:01	6.85	0.0	0.0	584.0	0.0	584.0
I	06/06/75	03:19	7.57	132.1	0.0	0.0	0.0	0.0
D	06/06/75	03:07	7.03	0.0	0.0	0.0	0.0	0.0
I	06/06/75	04:20	6.85	0.0	0.0	0.0	0.0	0.0
D	06/07/75	04:17	7.84	0.0	0.0	127.6	0.0	127.6
I	06/09/75	22:00	7.39	0.0	0.0	270.6	0.0	270.6
D	06/09/75	21:50	7.30	0.0	0.0	1232.9	0.0	1232.9
I	06/09/75	23:00	7.57	0.0	0.0	660.5	0.0	660.5
D	06/09/75	22:58	7.39	0.0	0.0	676.6	0.0	676.6
I	06/09/75	23:59	8.11	0.0	0.0	739.8	0.0	739.8
D	06/10/75	00:04	7.75	0.0	0.0	774.2	0.0	774.2
I	06/10/75	01:00	8.11	0.0	0.0	246.6	0.0	246.6

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/10/75	01:07	8.30	0.0	0.0	120.5	0.0	120.5
I	06/10/75	02:14	7.57	0.0	0.0	0.0	0.0	0.0
D	06/10/75	02:21	8.03	0.0	0.0	1120.8	0.0	1120.8
I	06/10/75	03:38	8.48	0.0	0.0	1415.1	0.0	1415.1
D	06/10/75	03:32	7.12	0.0	0.0	983.1	0.0	983.1
I	06/10/75	04:57	8.48	0.0	117.9	707.5	0.0	825.4
D	06/10/75	05:01	7.03	0.0	0.0	426.7	0.0	426.7
I	06/10/75	05:54	7.39	0.0	0.0	135.3	0.0	135.3
D	06/10/75	06:02	7.03	0.0	0.0	0.0	0.0	0.0
I	06/10/75	21:35	7.75	0.0	0.0	1161.3	0.0	1161.3
D	06/10/75	21:45	8.11	0.0	0.0	493.2	0.0	493.2
I	06/10/75	22:45	7.57	0.0	0.0	924.7	0.0	924.7
D	06/10/75	22:48	7.75	0.0	0.0	774.2	0.0	774.2
I	06/10/75	23:50	7.39	0.0	0.0	406.0	0.0	406.0
D	06/10/75	23:52	7.75	0.0	0.0	387.1	0.0	387.1
I	06/11/75	00:50	8.30	0.0	0.0	1084.4	0.0	1084.4
D	06/11/75	00:46	6.94	0.0	0.0	432.3	0.0	432.3
I	06/11/75	01:52	8.30	0.0	0.0	0.0	0.0	0.0
D	06/11/75	01:52	8.11	0.0	0.0	369.9	0.0	369.9
I	06/11/75	02:45	8.30	0.0	0.0	0.0	0.0	0.0
D	06/11/75	02:48	7.93	0.0	0.0	252.2	0.0	252.2
I	06/11/75	03:46	7.57	0.0	0.0	132.1	0.0	132.1
D	06/11/75	03:48	6.85	0.0	0.0	584.0	0.0	584.0
I	06/11/75	04:43	6.85	0.0	0.0	875.9	0.0	875.9
D	06/11/75	04:49	7.39	0.0	0.0	1082.5	0.0	1082.5
I	06/11/75	05:57	7.94	0.0	0.0	0.0	0.0	0.0
D	06/11/75	05:56	7.21	0.0	0.0	1387.0	0.0	1387.0
I	06/11/75	21:30	7.21	0.0	0.0	0.0	0.0	0.0
D	06/11/75	21:39	7.93	0.0	0.0	378.3	0.0	378.3
I	06/11/75	22:30	7.12	0.0	0.0	561.8	0.0	561.8
D	06/11/75	22:23	8.48	0.0	0.0	353.7	0.0	353.7

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/11/75	23:22	6.85	0.0	0.0	146.0	0.0	146.0
D	06/11/75	23:26	7.75	0.0	0.0	258.1	0.0	258.1
I	06/12/75	00:31	8.48	0.0	0.0	0.0	0.0	0.0
D	06/12/75	00:27	7.93	0.0	0.0	126.1	0.0	126.1
I	06/12/75	01:28	8.30	0.0	0.0	0.0	0.0	0.0
D	06/12/75	01:47	7.57	0.0	0.0	528.4	0.0	528.4
I	06/12/75	02:43	7.57	0.0	0.0	0.0	0.0	0.0
D	06/12/75	02:46	8.11	0.0	0.0	123.3	0.0	123.3
I	06/12/75	03:37	7.57	0.0	0.0	132.1	0.0	132.1
D	06/12/75	03:42	8.30	0.0	0.0	241.0	0.0	241.0
I	06/12/75	04:35	7.57	0.0	0.0	264.2	0.0	264.2
D	06/12/75	04:40	8.30	0.0	0.0	481.9	0.0	481.9
I	06/12/75	05:46	7.21	0.0	0.0	0.0	0.0	0.0
D	06/12/75	05:38	7.39	0.0	0.0	135.3	0.0	135.3
I	06/12/75	21:37	7.84	0.0	0.0	127.6	0.0	127.6
D	06/12/75	21:45	7.39	0.0	0.0	270.6	0.0	270.6
I	06/12/75	22:30	8.39	0.0	0.0	119.2	0.0	119.2
D	06/12/75	22:34	7.03	0.0	142.2	284.5	0.0	426.7
I	06/12/75	23:29	8.21	0.0	0.0	0.0	0.0	0.0
D	06/12/75	23:18	7.21	0.0	0.0	0.0	0.0	0.0
I	06/13/75	00:15	6.65	0.0	0.0	0.0	0.0	0.0
D	06/13/75	00:18	7.56	0.0	0.0	264.6	0.0	264.6
I	06/13/75	01:14	7.02	0.0	0.0	142.5	0.0	142.5
D	06/13/75	01:18	7.92	0.0	0.0	252.6	0.0	252.6
I	06/13/75	02:14	7.20	0.0	0.0	277.8	0.0	277.8
D	06/13/75	02:18	7.56	0.0	0.0	264.6	0.0	264.6
I	06/13/75	03:15	7.74	0.0	0.0	129.2	0.0	129.2
D	06/13/75	03:20	7.56	0.0	0.0	0.0	0.0	0.0
I	06/13/75	04:12	7.56	0.0	0.0	132.3	0.0	132.3
D	06/13/75	04:26	7.20	0.0	0.0	138.9	0.0	138.9
I	06/13/75	05:21	6.75	0.0	0.0	148.1	0.0	148.1

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	05:26	7.20	0.0	0.0	0.0	0.0	0.0
I	06/16/75	21:44	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	21:56	6.84	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:53	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:56	7.56	0.0	0.0	132.3	0.0	132.3
I	06/16/75	23:54	7.74	0.0	0.0	0.0	0.0	0.0
D	06/16/75	23:55	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:42	7.56	0.0	0.0	0.0	0.0	0.0
D	06/17/75	00:47	6.84	0.0	0.0	0.0	146.2	146.2
I	06/17/75	01:36	7.20	0.0	0.0	0.0	0.0	0.0
D	06/17/75	01:44	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	02:33	7.20	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:36	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:38	8.28	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:43	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:33	8.01	0.0	0.0	0.0	0.0	0.0
D	06/17/75	04:35	8.28	0.0	0.0	0.0	0.0	0.0
I	06/17/75	05:22	7.20	0.0	0.0	138.9	0.0	138.9
D	06/17/75	05:25	8.28	0.0	0.0	120.8	0.0	120.8
I	06/17/75	21:37	8.73	0.0	0.0	0.0	0.0	0.0
D	06/17/75	21:36	7.74	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:29	8.19	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:33	7.74	0.0	0.0	129.2	0.0	129.2
I	06/17/75	23:14	7.83	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:18	8.10	0.0	0.0	0.0	0.0	0.0
I	06/18/75	00:12	7.20	0.0	0.0	0.0	0.0	0.0
D	06/18/75	00:17	8.10	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:09	7.20	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:11	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:59	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	02:05	7.56	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/18/75	02:59	7.11	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:00	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	03:49	7.56	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:50	8.28	0.0	0.0	0.0	0.0	0.0
I	06/18/75	04:39	8.28	0.0	0.0	0.0	0.0	0.0
D	06/18/75	04:40	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	05:23	8.46	0.0	0.0	0.0	0.0	0.0
D	06/18/75	05:25	7.20	0.0	0.0	0.0	0.0	0.0
I	06/18/75	06:15	7.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	06:10	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	21:35	7.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:33	7.02	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:31	8.19	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:30	7.02	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:26	7.92	0.0	0.0	0.0	0.0	0.0
D	06/18/75	23:31	7.02	0.0	0.0	142.5	0.0	142.5
I	06/19/75	00:20	6.84	0.0	0.0	0.0	0.0	0.0
D	06/19/75	00:22	7.74	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:07	7.74	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:13	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:56	7.56	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:58	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	02:50	6.84	0.0	0.0	0.0	0.0	0.0
D	06/19/75	02:57	7.20	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:48	7.92	0.0	0.0	0.0	0.0	0.0
D	06/19/75	04:02	7.56	0.0	0.0	0.0	0.0	0.0
I	06/19/75	04:54	8.10	0.0	0.0	0.0	0.0	0.0
D	06/19/75	05:00	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	05:45	8.19	0.0	0.0	0.0	0.0	0.0
D	06/19/75	05:50	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	21:31	8.46	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	21:33	7.38	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:20	8.28	0.0	0.0	0.0	0.0	0.0
D	06/19/75	22:20	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:59	7.65	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:03	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:48	7.56	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:54	6.84	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:43	7.65	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:39	8.28	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:26	7.56	0.0	0.0	0.0	0.0	0.0
D	06/20/75	01:32	8.19	0.0	0.0	0.0	0.0	0.0
I	06/20/75	02:21	7.20	0.0	0.0	0.0	0.0	0.0
D	06/20/75	02:25	8.10	0.0	0.0	0.0	0.0	0.0
I	06/20/75	03:06	7.02	0.0	0.0	0.0	0.0	0.0
D	06/20/75	03:10	7.56	0.0	0.0	0.0	132.3	132.3
I	06/23/75	21:37	7.20	0.0	0.0	0.0	0.0	0.0
D	06/23/75	21:41	8.37	0.0	0.0	0.0	0.0	0.0
I	06/23/75	22:26	8.46	0.0	0.0	0.0	0.0	0.0
D	06/23/75	22:41	7.02	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:12	7.83	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:14	7.56	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:57	7.56	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:03	7.38	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:41	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:43	7.38	0.0	0.0	0.0	0.0	0.0
I	06/24/75	01:25	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:28	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:03	7.11	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:05	7.92	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:41	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:41	7.74	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/24/75	03:21	7.20	0.0	0.0	0.0	0.0	0.0
D	06/24/75	03:24	7.02	0.0	0.0	0.0	0.0	0.0
I	06/24/75	04:13	7.02	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:34	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	05:23	7.02	0.0	0.0	0.0	0.0	0.0
D	06/24/75	05:20	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	06:04	6.93	0.0	0.0	0.0	0.0	0.0
D	06/24/75	06:03	7.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	21:26	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	21:29	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:09	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:11	8.28	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:52	8.28	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:52	7.83	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:32	8.28	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:34	8.10	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:21	8.46	0.0	0.0	0.0	118.2	118.2
D	06/25/75	00:14	8.28	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:02	7.74	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:01	7.38	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:43	7.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:49	7.92	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:34	7.83	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:33	8.28	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:14	7.20	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:12	7.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:54	7.20	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:53	7.74	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:38	6.93	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:34	7.11	0.0	0.0	0.0	140.6	140.6
I	06/25/75	05:14	7.20	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/26/75	23:50	7.92	0.0	0.0	0.0	0.0	0.0
D	06/26/75	23:53	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	00:30	8.01	0.0	0.0	0.0	0.0	0.0
D	06/27/75	00:35	8.28	0.0	0.0	0.0	0.0	0.0
I	06/27/75	01:22	7.74	0.0	0.0	0.0	0.0	0.0
D	06/27/75	01:29	8.10	0.0	0.0	0.0	0.0	0.0
I	06/27/75	02:10	7.83	0.0	0.0	0.0	127.7	127.7
D	06/27/75	02:18	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	03:00	8.19	0.0	0.0	0.0	0.0	0.0
D	06/27/75	03:02	7.99	0.0	0.0	0.0	0.0	0.0
I	06/27/75	03:45	7.83	0.0	0.0	0.0	0.0	0.0
D	06/27/75	03:52	6.84	0.0	0.0	0.0	0.0	0.0
I	06/27/75	04:30	7.74	0.0	0.0	0.0	0.0	0.0
D	06/27/75	04:34	7.74	0.0	0.0	0.0	0.0	0.0
I	06/27/75	05:20	6.84	0.0	0.0	0.0	0.0	0.0
D	06/27/75	05:24	7.74	0.0	0.0	0.0	0.0	0.0
I	06/30/75	20:33	7.92	0.0	0.0	0.0	0.0	0.0
D	06/30/75	20:45	7.92	0.0	0.0	0.0	0.0	0.0
I	06/30/75	21:27	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	21:26	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:14	8.10	0.0	0.0	123.5	0.0	123.5
D	06/30/75	22:14	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	* 23:01	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	** 23:00	7.92	0.0	0.0	0.0	0.0	0.0
I	06/30/75	23:48	8.10	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:46	8.28	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:30	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:30	7.02	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:16	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:20	7.29	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:06	8.28	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/01/75	02:14	7.47	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:57	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:00	7.38	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:42	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:50	7.74	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:26	8.28	0.0	0.0	0.0	0.0	0.0
D	07/01/75	04:30	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:08	8.19	0.0	0.0	0.0	0.0	0.0
D	07/01/75	05:21	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:57	7.38	0.0	0.0	0.0	135.5	135.5
D	07/01/75	06:00	7.20	0.0	0.0	0.0	0.0	0.0
I	07/01/75	06:37	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:40	7.47	0.0	0.0	0.0	0.0	0.0
I	07/01/75	20:35	6.93	0.0	0.0	144.3	0.0	144.3
D	07/01/75	20:40	8.28	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:20	8.46	0.0	0.0	0.0	0.0	0.0
D	07/01/75	21:17	7.56	0.0	0.0	132.3	0.0	132.3
I	07/01/75	22:18	7.92	0.0	0.0	0.0	0.0	0.0
D	07/01/75	22:17	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	23:31	7.56	0.0	0.0	0.0	0.0	0.0
D	07/01/75	23:29	8.28	0.0	0.0	0.0	0.0	0.0
I	07/02/75	00:13	7.92	0.0	0.0	0.0	0.0	0.0
D	07/02/75	00:13	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:00	7.20	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:00	7.92	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:44	6.66	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:48	7.56	0.0	0.0	0.0	0.0	0.0
I	07/02/75	02:40	7.47	0.0	0.0	0.0	0.0	0.0
D	07/02/75	02:41	8.28	0.0	0.0	0.0	0.0	0.0
I	07/02/75	03:33	8.19	0.0	0.0	0.0	0.0	0.0
D	07/02/75	03:32	7.92	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/02/75	04:14	8.28	0.0	0.0	0.0	0.0	0.0
D	07/02/75	04:20	7.20	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:01	7.83	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:04	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:37	8.55	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:40	7.92	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:35	8.37	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:34	7.20	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:49	8.64	0.0	0.0	0.0	0.0	0.0
D	07/07/75	20:36	7.02	0.0	0.0	0.0	0.0	0.0
I	07/07/75	21:55	7.74	0.0	0.0	0.0	129.2	129.2
D	07/07/75	21:41	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:40	7.20	0.0	0.0	0.0	0.0	0.0
D	07/07/75	22:34	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:35	7.38	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:30	7.20	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:21	6.84	0.0	0.0	0.0	146.2	146.2
D	07/08/75	00:18	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:04	7.74	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:02	7.11	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:51	7.20	0.0	0.0	0.0	138.9	138.9
D	07/08/75	01:50	6.84	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:38	7.56	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:33	7.92	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:31	7.20	0.0	0.0	0.0	138.9	138.9
D	07/08/75	03:22	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	04:18	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:15	8.10	0.0	0.0	0.0	0.0	0.0
I	07/08/75	05:23	7.38	0.0	0.0	0.0	0.0	0.0
D	07/08/75	05:15	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:09	7.29	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/08/75	06:07	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:52	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	06:51	7.56	0.0	0.0	0.0	0.0	0.0
I	07/14/75	20:41	6.66	0.0	0.0	0.0	0.0	0.0
D	07/14/75	20:45	8.10	0.0	0.0	123.5	0.0	123.5
I	07/14/75	22:06	6.84	0.0	0.0	0.0	0.0	0.0
D	07/14/75	22:05	7.92	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:05	7.20	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:02	8.10	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:53	7.56	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:55	7.92	0.0	0.0	126.3	0.0	126.3
I	07/15/75	00:44	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	00:39	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	01:37	8.28	0.0	0.0	0.0	0.0	0.0
D	07/15/75	01:42	7.56	0.0	0.0	0.0	0.0	0.0
I	07/15/75	02:34	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	02:40	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	03:23	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	03:25	7.92	0.0	0.0	0.0	0.0	0.0
I	07/15/75	04:34	7.56	0.0	0.0	0.0	0.0	0.0
D	07/15/75	04:10	8.28	0.0	0.0	0.0	0.0	0.0
I	07/15/75	05:13	7.20	0.0	0.0	0.0	138.9	138.9
D	07/15/75	05:13	8.19	0.0	0.0	0.0	0.0	0.0
I	07/15/75	06:03	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	05:53	8.28	0.0	0.0	0.0	0.0	0.0
I	07/21/75	14:40	6.66	0.0	0.0	0.0	0.0	0.0
D	07/21/75	14:33	7.02	0.0	0.0	0.0	0.0	0.0
I	07/21/75	15:30	7.47	0.0	0.0	0.0	0.0	0.0
D	07/21/75	15:32	7.20	0.0	0.0	0.0	0.0	0.0
I	07/21/75	16:13	6.84	0.0	0.0	0.0	0.0	0.0
D	07/21/75	16:15	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/28/75	21:50	7.12	421.3	0.0	280.9	0.0	280.9
D	05/28/75	21:40	7.84	0.0	0.0	255.1	0.0	255.1
I	05/28/75	23:27	7.75	0.0	0.0	645.2	0.0	645.2
D	05/28/75	23:25	8.30	0.0	0.0	2048.2	0.0	2048.2
I	05/29/75	00:41	8.48	0.0	117.9	1297.1	0.0	1415.0
D	05/29/75	00:33	8.33	0.0	0.0	2160.8	0.0	2160.8
I	05/29/75	02:00	8.12	0.0	0.0	492.6	0.0	492.6
D	05/29/75	02:00	7.93	378.3	0.0	2017.6	0.0	2017.6
I	05/29/75	03:05	8.30	120.5	0.0	481.9	0.0	481.9
D	05/29/75	03:10	7.66	1174.9	0.0	652.7	0.0	652.7
I	05/29/75	04:35	7.39	270.6	0.0	135.3	0.0	135.3
D	05/29/75	04:31	7.57	792.6	0.0	264.2	0.0	264.2
I	05/29/75	05:25	8.30	5903.6	0.0	602.4	0.0	602.4
D	05/29/75	05:31	7.75	903.2	0.0	0.0	0.0	0.0
I	05/29/75	21:17	7.93	252.2	0.0	1261.0	0.0	1261.0
D	05/29/75	21:23	8.34	0.0	0.0	719.4	0.0	719.4
I	05/29/75	22:46	8.11	0.0	0.0	616.5	0.0	616.5
D	05/29/75	22:45	8.11	123.3	0.0	493.2	0.0	493.2
I	05/30/75	00:15	7.57	0.0	0.0	924.7	0.0	924.7
D	05/30/75	00:28	7.76	0.0	0.0	902.0	0.0	902.0
I	05/30/75	01:31	7.03	0.0	0.0	0.0	0.0	0.0
D	05/30/75	01:28	8.11	0.0	0.0	1479.7	0.0	1479.7
I	05/30/75	03:24	8.20	243.9	0.0	487.8	0.0	487.8
D	05/30/75	03:20	8.48	943.4	0.0	1061.3	0.0	1061.3
I	05/30/75	05:14	8.03	0.0	0.0	0.0	0.0	0.0
D	05/30/75	05:17	7.66	522.2	0.0	522.1	0.0	522.1
I	06/02/75	21:42	6.58	0.0	0.0	759.9	0.0	759.9
D	06/02/75	22:00	7.30	0.0	0.0	821.9	0.0	821.9
I	06/02/75	23:18	8.30	120.5	0.0	602.4	0.0	602.4
D	06/02/75	23:32	8.12	0.0	123.2	369.5	246.3	739.0
I	06/03/75	00:44	7.39	0.0	0.0	947.2	0.0	947.2

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/03/75	00:53	7.75	0.0	0.0	1032.3	0.0	1032.3
I	06/03/75	02:13	7.03	0.0	0.0	711.2	0.0	711.2
D	06/03/75	02:12	7.57	0.0	0.0	1056.8	0.0	1056.8
I	06/03/75	03:18	7.75	0.0	0.0	0.0	0.0	0.0
D	06/03/75	03:27	8.30	0.0	0.0	0.0	0.0	0.0
I	06/03/75	04:37	7.57	0.0	0.0	396.3	0.0	396.3
D	06/03/75	04:49	8.30	0.0	0.0	482.0	0.0	482.0
I	06/03/75	05:49	7.21	0.0	0.0	970.9	0.0	970.9
D	06/03/75	05:48	7.57	0.0	132.1	660.5	0.0	792.6
I	06/03/75	22:06	7.75	0.0	0.0	129.0	0.0	129.0
D	06/03/75	21:41	7.57	0.0	0.0	396.3	0.0	396.3
I	06/03/75	22:57	7.93	0.0	0.0	378.3	0.0	378.3
D	06/03/75	23:00	7.03	0.0	0.0	425.7	0.0	426.7
I	06/03/75	23:56	7.39	0.0	0.0	270.6	0.0	270.6
D	06/04/75	00:03	7.39	0.0	0.0	270.6	0.0	270.6
I	06/04/75	01:27	7.03	0.0	0.0	142.2	0.0	142.2
D	06/04/75	01:20	7.30	0.0	0.0	137.0	0.0	137.0
I	06/04/75	02:45	7.57	0.0	0.0	0.0	0.0	0.0
D	06/04/75	02:42	7.39	0.0	0.0	137.0	0.0	137.0
I	06/04/75	03:56	7.21	0.0	0.0	0.0	0.0	0.0
D	06/04/75	03:45	7.57	0.0	0.0	0.0	0.0	0.0
I	06/04/75	05:05	7.57	0.0	0.0	132.1	0.0	132.1
D	06/04/75	04:58	7.57	0.0	0.0	0.0	0.0	0.0
I	06/04/75	06:00	8.30	0.0	0.0	0.0	0.0	0.0
D	06/04/75	05:59	7.57	0.0	0.0	132.1	0.0	132.1
I	06/04/75	21:31	8.30	0.0	0.0	843.4	0.0	843.4
D	06/04/75	21:33	6.85	0.0	0.0	4963.5	0.0	4963.5
I	06/04/75	22:40	8.11	0.0	0.0	4069.0	0.0	4069.0
D	06/04/75	22:42	6.85	0.0	0.0	5109.5	0.0	5109.5
I	06/04/75	23:45	6.85	0.0	0.0	1313.9	0.0	1313.9
D	06/04/75	23:49	7.46	0.0	0.0	1738.0	0.0	1738.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

(A) STATION	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/05/75	00:45	7.21	0.0	0.0	1109.6	0.0	1109.6
D	06/05/75	00:50	6.94	0.0	0.0	1008.7	0.0	1008.7
I	06/05/75	01:57	6.85	0.0	0.0	146.0	0.0	146.0
D	06/05/75	02:01	7.39	0.0	0.0	676.6	0.0	676.6
I	06/05/75	03:15	8.48	0.0	0.0	235.8	0.0	235.8
D	06/05/75	03:05	6.85	0.0	0.0	0.0	0.0	0.0
I	06/05/75	04:25	7.57	0.0	0.0	264.2	0.0	264.2
D	06/05/75	04:25	7.57	0.0	0.0	528.4	0.0	528.4
I	06/05/75	05:20	6.85	0.0	0.0	292.0	0.0	292.0
D	06/05/75	05:25	7.66	0.0	0.0	913.8	0.0	913.8
I	06/05/75	21:40	7.93	0.0	0.0	126.1	0.0	126.1
D	06/05/75	21:46	7.75	0.0	0.0	1032.2	0.0	1032.2
I	06/05/75	22:50	7.21	0.0	0.0	832.2	0.0	832.2
D	06/05/75	22:46	6.85	0.0	0.0	1897.8	0.0	1897.8
I	06/05/75	23:50	7.21	0.0	0.0	2635.2	0.0	2635.2
D	06/05/75	23:41	7.84	0.0	0.0	1785.8	0.0	1785.8
I	06/06/75	01:05	7.39	0.0	0.0	947.2	0.0	947.2
D	06/06/75	00:50	6.85	0.0	0.0	1459.9	0.0	1459.9
I	06/06/75	02:07	7.93	0.0	0.0	504.4	0.0	504.4
D	06/06/75	02:01	6.85	0.0	0.0	0.0	0.0	0.0
I	06/06/75	03:19	7.57	0.0	0.0	0.0	0.0	0.0
D	06/06/75	03:07	7.03	0.0	0.0	142.2	0.0	142.2
I	06/06/75	04:20	6.85	146.0	0.0	0.0	0.0	0.0
D	06/07/75	04:17	7.84	0.0	0.0	510.3	0.0	510.3
I	06/09/75	22:00	7.39	0.0	0.0	676.6	0.0	676.6
D	06/09/75	21:50	7.30	0.0	0.0	2328.8	0.0	2328.8
I	06/09/75	23:00	7.57	0.0	0.0	528.4	0.0	528.4
D	06/09/75	22:58	7.39	0.0	0.0	811.9	0.0	811.9
I	06/09/75	23:59	8.11	0.0	0.0	1109.7	123.3	1233.0
D	06/10/75	00:04	7.75	0.0	0.0	1290.3	129.0	1419.3
I	06/10/75	01:00	8.11	0.0	0.0	739.8	123.3	863.1

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/10/75	01:07	8.30	0.0	0.0	120.5	0.0	120.5
I	06/10/75	02:14	7.57	0.0	0.0	1717.3	0.0	1717.3
D	06/10/75	02:21	8.03	0.0	0.0	4732.3	124.5	4856.8
I	06/10/75	03:38	8.48	0.0	0.0	2004.7	117.9	2122.6
D	06/10/75	03:32	7.12	0.0	0.0	3511.2	0.0	3511.2
I	06/10/75	04:57	8.48	0.0	0.0	1061.3	0.0	1061.3
D	06/10/75	05:01	7.03	0.0	0.0	3413.9	426.7	3840.6
I	06/10/75	05:54	7.39	0.0	0.0	135.3	0.0	135.3
D	06/10/75	06:02	7.03	0.0	0.0	853.5	0.0	853.5
I	06/10/75	21:35	7.75	0.0	0.0	2193.6	129.0	2322.6
D	06/10/75	21:45	8.11	0.0	0.0	1849.6	0.0	1849.6
I	06/10/75	22:45	7.57	0.0	0.0	2113.6	0.0	2113.6
D	06/10/75	22:48	7.75	0.0	0.0	2967.7	0.0	2967.7
I	06/10/75	23:50	7.39	0.0	0.0	1353.2	0.0	1353.2
D	06/10/75	23:52	7.75	0.0	0.0	2967.8	258.1	3225.9
I	06/11/75	00:50	8.30	0.0	0.0	1927.7	120.5	2048.2
D	06/11/75	00:46	6.94	0.0	0.0	2449.6	0.0	2449.6
I	06/11/75	01:52	8.30	0.0	0.0	722.9	0.0	722.9
D	06/11/75	01:52	8.11	0.0	0.0	1726.2	0.0	1726.2
I	06/11/75	02:45	8.30	0.0	0.0	0.0	0.0	0.0
D	06/11/75	02:48	7.93	0.0	0.0	882.7	252.2	1134.9
I	06/11/75	03:46	7.57	0.0	0.0	528.4	264.2	792.6
D	06/11/75	03:48	6.85	0.0	0.0	583.9	875.9	1459.8
I	06/11/75	04:43	6.85	0.0	0.0	1021.9	0.0	1021.9
D	06/11/75	04:49	7.39	0.0	0.0	4736.2	811.9	5548.1
I	06/11/75	05:57	7.94	0.0	0.0	629.7	0.0	629.7
D	06/11/75	05:56	7.21	0.0	0.0	2496.6	416.1	2912.7
I	06/11/75	21:30	7.21	0.0	0.0	554.8	138.7	693.5
D	06/11/75	21:39	7.93	0.0	0.0	1639.3	126.1	1765.4
I	06/11/75	22:30	7.12	0.0	0.0	1825.8	140.4	1966.2
D	06/11/75	22:23	8.48	0.0	0.0	2712.2	235.8	2948.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/11/75	23:22	6.85	0.0	0.0	1459.9	438.0	1897.9
D	06/11/75	23:26	7.75	0.0	0.0	2064.5	387.1	2451.6
I	06/12/75	00:31	8.48	0.0	0.0	825.5	235.8	1061.3
D	06/12/75	00:27	7.93	0.0	0.0	1261.0	0.0	1261.0
I	06/12/75	01:28	8.30	0.0	0.0	482.0	0.0	482.0
D	06/12/75	01:47	7.57	0.0	0.0	1188.9	132.1	1321.0
I	06/12/75	02:43	7.57	0.0	0.0	132.1	132.1	264.2
D	06/12/75	02:46	8.11	0.0	0.0	369.9	246.6	616.5
I	06/12/75	03:37	7.57	0.0	0.0	396.3	132.1	528.4
D	06/12/75	03:42	8.30	0.0	0.0	843.4	602.4	1445.8
I	06/12/75	04:35	7.57	0.0	0.0	924.7	132.1	1056.8
D	06/12/75	04:40	8.30	0.0	0.0	2289.1	1927.7	4216.8
I	06/12/75	05:46	7.21	0.0	0.0	277.4	138.7	416.1
D	06/12/75	05:38	7.39	0.0	0.0	1488.5	811.9	2300.4
I	06/12/75	21:37	7.84	0.0	0.0	1020.5	127.6	1148.1
D	06/12/75	21:45	7.39	0.0	0.0	947.2	0.0	947.2
I	06/12/75	22:30	8.39	0.0	0.0	119.2	0.0	119.2
D	06/12/75	22:34	7.03	0.0	0.0	853.5	0.0	853.5
I	06/12/75	23:29	8.21	0.0	0.0	730.8	0.0	730.8
D	06/12/75	23:18	7.21	0.0	0.0	970.9	277.4	1248.3
I	06/13/75	00:15	6.66	0.0	0.0	450.5	150.2	600.7
D	06/13/75	00:18	7.56	0.0	0.0	396.9	396.9	793.8
I	06/13/75	01:14	7.02	0.0	0.0	712.3	427.4	1139.7
D	06/13/75	01:18	7.92	0.0	0.0	631.3	252.5	883.8
I	06/13/75	02:14	7.20	0.0	0.0	833.3	0.0	833.3
D	06/13/75	02:18	7.56	0.0	0.0	396.9	132.3	529.2
I	06/13/75	03:15	7.74	0.0	0.0	129.2	129.2	258.4
D	06/13/75	03:20	7.56	0.0	0.0	925.9	396.9	1322.8
I	06/13/75	04:12	7.56	0.0	0.0	396.9	132.3	529.2
D	06/13/75	04:26	7.20	0.0	0.0	1527.8	1388.9	2916.7
I	06/13/75	05:21	6.75	0.0	0.0	888.8	0.0	888.8

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	05:26	7.20	0.0	0.0	3194.5	138.9	3333.4
I	06/16/75	21:44	7.74	0.0	0.0	387.6	129.2	516.8
D	06/16/75	21:56	6.84	0.0	0.0	1900.6	0.0	1900.6
I	06/16/75	22:53	7.74	0.0	0.0	1938.0	904.4	2842.4
D	06/16/75	22:56	7.56	0.0	0.0	1984.1	1058.2	3042.3
I	06/16/75	23:54	7.74	0.0	0.0	1162.8	775.2	1938.0
D	06/16/75	23:55	8.28	0.0	0.0	2053.1	603.9	2657.0
I	06/17/75	00:42	7.56	0.0	0.0	1058.2	396.8	1455.0
D	06/17/75	00:47	6.84	0.0	0.0	2339.2	438.6	2777.8
I	06/17/75	01:36	7.20	0.0	0.0	1527.8	416.7	1944.5
D	06/17/75	01:44	8.28	0.0	0.0	2173.9	603.9	2777.8
I	06/17/75	02:33	7.20	0.0	0.0	1805.6	1250.0	3055.6
D	06/17/75	02:36	7.74	0.0	0.0	904.4	387.6	1292.0
I	06/17/75	03:38	8.28	0.0	0.0	362.3	362.3	724.6
D	06/17/75	03:43	7.74	0.0	0.0	1550.4	387.6	1938.0
I	06/17/75	04:33	8.01	0.0	0.0	124.8	124.8	249.6
D	06/17/75	04:35	8.28	0.0	0.0	845.4	241.6	1087.0
I	06/17/75	05:22	7.20	0.0	0.0	833.3	138.9	972.2
D	06/17/75	05:25	8.28	0.0	0.0	483.1	483.1	966.2
I	06/17/75	21:37	8.73	0.0	0.0	1489.1	458.2	1947.3
D	06/17/75	21:36	7.74	0.0	0.0	646.0	387.6	1033.6
I	06/17/75	22:29	8.19	0.0	0.0	976.8	366.3	1343.1
D	06/17/75	22:33	7.74	0.0	0.0	2454.8	775.2	3230.0
I	06/17/75	23:14	7.83	0.0	0.0	2554.3	766.3	3320.6
D	06/17/75	23:18	8.10	0.0	0.0	1975.3	617.3	2592.6
I	06/18/75	00:12	7.20	0.0	0.0	277.8	416.7	694.5
D	06/18/75	00:17	8.10	0.0	0.0	0.0	370.4	370.4
I	06/18/75	01:09	7.20	0.0	0.0	277.8	0.0	277.8
D	06/18/75	01:11	6.84	0.0	0.0	731.0	438.6	1169.6
I	06/18/75	01:59	6.84	0.0	0.0	1169.6	292.4	1462.0
D	06/18/75	02:05	7.56	0.0	0.0	1190.5	264.6	1455.1

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/18/75	02:59	7.11	0.0	0.0	703.2	140.6	843.8
D	06/18/75	03:00	6.84	0.0	0.0	877.2	731.0	1608.2
I	06/18/75	03:49	7.56	0.0	0.0	264.6	0.0	264.6
D	06/18/75	03:50	8.28	0.0	0.0	362.3	241.5	603.8
I	06/18/75	04:39	8.28	0.0	0.0	603.9	241.5	845.4
D	06/18/75	04:40	6.84	0.0	0.0	731.0	146.2	877.2
I	06/18/75	05:23	8.46	0.0	0.0	945.6	0.0	945.6
D	06/18/75	05:25	7.20	0.0	0.0	1111.1	138.9	1250.0
I	06/18/75	06:15	7.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	06:10	6.84	0.0	0.0	438.6	0.0	438.6
I	06/18/75	21:35	7.65	0.0	0.0	130.7	0.0	130.7
D	06/18/75	21:33	7.02	0.0	142.5	569.8	427.4	1139.7
I	06/18/75	22:31	8.19	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:30	7.02	0.0	0.0	284.9	427.4	712.3
I	06/18/75	23:25	7.92	0.0	0.0	883.9	0.0	883.9
D	06/18/75	23:31	7.02	0.0	0.0	284.9	854.7	1139.6
I	06/19/75	00:20	6.84	0.0	0.0	1169.6	1462.0	2631.6
D	06/19/75	00:22	7.74	0.0	0.0	904.4	516.8	1421.2
I	06/19/75	01:07	7.74	0.0	0.0	904.4	646.0	1550.4
D	06/19/75	01:13	7.20	0.0	0.0	1111.1	1805.6	2916.7
I	06/19/75	01:56	7.56	0.0	0.0	264.6	396.8	661.4
D	06/19/75	01:58	7.20	0.0	0.0	416.7	1250.0	1666.7
I	06/19/75	02:50	6.84	0.0	0.0	731.0	1462.0	2193.0
D	06/19/75	02:57	7.20	0.0	0.0	416.7	138.9	555.6
I	06/19/75	03:48	7.92	0.0	0.0	631.3	2777.8	3409.1
D	06/19/75	04:02	7.56	0.0	0.0	132.3	132.3	264.6
I	06/19/75	04:54	8.10	0.0	0.0	123.5	864.2	987.7
D	06/19/75	05:00	7.02	0.0	0.0	569.8	427.4	997.2
I	06/19/75	05:45	8.19	0.0	0.0	244.2	366.3	610.5
D	06/19/75	05:50	7.02	0.0	0.0	284.9	142.5	427.4
I	06/19/75	21:31	8.46	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

(A) STATION	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	21:33	7.38	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:20	8.28	0.0	0.0	0.0	120.8	120.8
D	06/19/75	22:20	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:59	7.65	0.0	0.0	522.9	0.0	522.9
D	06/19/75	23:03	7.02	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:48	7.56	0.0	0.0	132.3	264.6	396.9
D	06/19/75	23:54	6.84	0.0	0.0	292.4	0.0	292.4
I	06/20/75	00:43	7.65	0.0	0.0	522.9	0.0	522.9
D	06/20/75	00:39	8.28	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:26	7.56	0.0	0.0	793.6	529.1	1322.7
D	06/20/75	01:32	8.19	0.0	0.0	0.0	732.6	732.6
I	06/20/75	02:21	7.20	0.0	0.0	833.4	694.4	1527.8
D	06/20/75	02:25	8.10	0.0	0.0	617.3	246.9	864.2
I	06/20/75	03:06	7.02	0.0	0.0	427.4	712.3	1139.7
D	06/20/75	03:10	7.56	0.0	0.0	925.9	793.7	1719.6
I	06/23/75	21:37	7.20	0.0	0.0	138.9	0.0	138.9
D	06/23/75	21:41	8.37	0.0	0.0	836.3	477.9	1314.2
I	06/23/75	22:26	8.46	0.0	0.0	1182.0	354.6	1536.6
D	06/23/75	22:41	7.02	0.0	0.0	854.7	712.3	1567.0
I	06/23/75	23:12	7.83	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:14	7.56	0.0	0.0	132.3	132.3	264.6
I	06/23/75	23:57	7.56	0.0	0.0	0.0	264.6	264.6
D	06/24/75	00:03	7.38	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:41	8.10	0.0	0.0	370.4	0.0	370.4
D	06/24/75	00:43	7.38	0.0	0.0	542.0	0.0	542.0
I	06/24/75	01:25	8.10	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:28	8.28	0.0	0.0	120.8	0.0	120.8
I	06/24/75	02:03	7.11	0.0	0.0	140.6	281.3	421.9
D	06/24/75	02:05	7.92	0.0	0.0	252.6	0.0	252.6
I	06/24/75	02:41	8.10	0.0	0.0	123.5	0.0	123.5
D	06/24/75	02:41	7.74	0.0	0.0	387.6	129.2	516.8

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY (NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/24/75	03:21	7.20	0.0	0.0	0.0	555.6	555.6
D	06/24/75	03:24	7.02	0.0	0.0	284.9	1567.0	1851.9
I	06/24/75	04:13	7.02	0.0	0.0	427.4	997.2	1424.6
D	06/24/75	04:34	8.28	0.0	0.0	483.1	120.8	603.9
I	06/24/75	05:23	7.02	0.0	0.0	0.0	0.0	0.0
D	06/24/75	05:20	8.10	0.0	0.0	123.5	987.7	1111.2
I	06/24/75	06:04	6.93	0.0	0.0	0.0	144.3	144.3
D	06/24/75	06:03	7.56	0.0	0.0	264.6	396.8	661.4
I	06/24/75	21:26	6.84	0.0	0.0	0.0	146.2	146.2
D	06/24/75	21:29	8.10	0.0	0.0	0.0	246.9	246.9
I	06/24/75	22:09	8.10	0.0	0.0	864.2	123.5	987.7
D	06/24/75	22:11	8.28	0.0	0.0	724.6	845.4	1570.0
I	06/24/75	22:52	8.28	0.0	0.0	120.8	241.5	362.3
D	06/24/75	22:52	7.83	0.0	0.0	510.9	383.1	894.0
I	06/24/75	23:32	8.28	0.0	0.0	241.5	120.8	362.3
D	06/24/75	23:34	8.10	0.0	0.0	493.8	0.0	493.8
I	06/24/75	00:21	8.46	0.0	0.0	118.2	236.4	354.6
D	06/25/75	00:14	8.28	0.0	0.0	603.9	120.8	724.7
I	06/25/75	01:02	7.74	0.0	0.0	258.4	129.2	387.6
D	06/25/75	01:01	7.38	0.0	0.0	135.5	0.0	135.5
I	06/25/75	01:43	7.56	0.0	0.0	264.6	0.0	264.6
D	06/25/75	01:49	7.92	0.0	0.0	252.5	0.0	252.5
I	06/25/75	02:34	7.83	0.0	0.0	127.7	127.7	255.4
D	06/25/75	02:33	8.28	0.0	0.0	0.0	120.8	120.8
I	06/25/75	03:14	7.20	0.0	0.0	0.0	277.8	277.8
D	06/25/75	03:12	7.56	0.0	0.0	396.9	396.8	793.7
I	06/25/75	03:54	7.20	0.0	0.0	277.8	1111.1	1388.9
D	06/25/75	03:53	7.74	0.0	0.0	646.0	775.2	1421.2
I	06/25/75	04:38	6.93	0.0	0.0	432.9	144.3	577.2
D	06/25/75	04:34	7.11	0.0	0.0	562.6	984.5	1547.1
I	06/25/75	05:14	7.20	0.0	0.0	0.0	138.9	138.9

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/25/75	05:18	7.74	0.0	0.0	904.4	516.8	1421.2
I	06/25/75	06:01	7.20	0.0	0.0	138.9	138.9	277.8
D	06/25/75	06:06	8.28	0.0	0.0	362.3	0.0	362.3
I	06/25/75	21:41	7.11	0.0	0.0	562.5	562.5	1125.0
D	06/25/75	21:37	7.20	0.0	0.0	416.7	138.9	555.6
I	06/25/75	22:32	7.56	0.0	0.0	529.1	132.3	661.4
D	06/25/75	22:29	7.20	0.0	0.0	694.5	0.0	694.5
I	06/25/75	23:16	8.46	0.0	0.0	709.2	118.2	827.4
D	06/25/75	23:16	8.28	0.0	0.0	362.3	120.8	483.1
I	06/26/75	00:10	8.10	0.0	0.0	370.4	123.5	493.9
D	06/26/75	00:11	8.28	0.0	0.0	0.0	0.0	0.0
I	06/26/75	01:00	8.46	0.0	0.0	236.4	0.0	236.4
D	06/26/75	00:59	7.20	0.0	0.0	0.0	0.0	0.0
I	06/26/75	01:48	7.92	0.0	0.0	126.3	0.0	126.3
D	06/27/75	01:49	7.74	0.0	0.0	0.0	0.0	0.0
I	06/26/75	02:33	7.74	0.0	0.0	0.0	129.2	129.2
D	06/26/75	02:34	7.38	0.0	0.0	271.0	0.0	271.0
I	06/26/75	03:18	7.92	0.0	0.0	378.8	0.0	378.8
D	06/26/75	03:21	7.38	0.0	0.0	135.5	135.5	271.0
I	06/26/75	04:02	7.20	0.0	0.0	138.9	0.0	138.9
D	06/26/75	04:09	7.38	0.0	0.0	135.5	271.0	406.5
I	06/26/75	04:51	6.84	0.0	0.0	584.8	584.8	1169.6
D	06/26/75	04:51	7.74	0.0	0.0	646.0	129.2	775.2
I	06/26/75	05:40	7.20	0.0	0.0	0.0	0.0	0.0
D	06/26/75	05:42	7.20	0.0	0.0	277.8	277.8	555.6
I	06/26/75	21:34	7.20	0.0	0.0	138.9	694.5	833.4
D	06/26/75	21:36	6.84	0.0	0.0	292.4	292.4	584.8
I	06/26/75	22:20	8.46	0.0	0.0	118.2	354.6	472.8
D	06/26/75	22:20	7.38	0.0	0.0	406.5	271.0	677.5
I	06/26/75	23:10	7.02	0.0	0.0	0.0	142.5	142.5
D	06/26/75	23:07	7.20	0.0	0.0	555.6	0.0	555.6

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/26/75	23:50	7.92	0.0	0.0	252.5	126.3	378.8
D	06/26/75	23:53	6.84	0.0	0.0	0.0	146.2	146.2
I	06/27/75	00:30	8.01	0.0	0.0	499.3	249.7	749.0
D	06/27/75	00:35	8.28	0.0	0.0	483.1	241.6	724.7
I	06/27/75	01:22	7.74	0.0	0.0	129.2	0.0	129.2
D	06/27/75	01:29	8.10	0.0	0.0	246.9	123.5	370.4
I	06/27/75	02:10	7.83	0.0	0.0	127.7	0.0	127.7
D	06/27/75	02:18	6.84	0.0	0.0	731.0	146.2	877.2
I	06/27/75	03:00	8.19	0.0	0.0	122.1	122.1	244.2
D	06/27/75	03:02	7.99	0.0	0.0	250.3	125.2	375.5
I	06/27/75	03:45	7.83	0.0	0.0	255.4	127.7	383.1
D	06/27/75	03:52	6.84	0.0	0.0	146.2	0.0	146.2
I	06/27/75	04:30	7.74	0.0	0.0	258.4	904.4	1162.8
D	06/27/75	04:34	7.74	0.0	0.0	0.0	387.6	387.6
I	06/27/75	05:20	6.84	0.0	0.0	0.0	292.4	292.4
D	06/27/75	05:24	7.74	0.0	0.0	129.2	516.8	646.0
I	06/30/75	20:33	7.92	0.0	0.0	126.3	0.0	126.3
D	06/30/75	20:45	7.92	0.0	0.0	378.8	0.0	378.8
I	06/30/75	21:27	8.28	0.0	0.0	0.0	362.3	362.3
D	06/30/75	21:26	8.28	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:14	8.10	0.0	0.0	0.0	493.8	493.8
D	06/30/75	22:14	6.84	0.0	0.0	0.0	146.2	146.2
I	06/30/75	23:01	8.28	0.0	0.0	0.0	241.5	241.5
D	06/30/75	23:00	7.92	0.0	0.0	252.5	126.3	378.8
I	06/30/75	23:48	8.10	0.0	0.0	0.0	246.9	246.9
D	06/30/75	23:46	8.28	0.0	0.0	120.8	120.8	241.6
I	07/01/75	00:30	8.10	0.0	0.0	0.0	370.4	370.4
D	07/01/75	00:30	7.02	0.0	0.0	142.5	0.0	142.5
I	07/01/75	01:16	8.10	0.0	0.0	123.5	1234.6	1358.1
D	07/01/75	01:20	7.29	0.0	0.0	137.2	137.2	274.4
I	07/01/75	02:06	8.28	0.0	0.0	0.0	241.5	241.5

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/01/75	02:14	7.47	0.0	0.0	0.0	133.9	133.9
I	07/01/75	02:57	8.28	0.0	0.0	0.0	1086.9	1086.9
D	07/01/75	03:00	7.38	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:42	8.28	0.0	0.0	120.8	1570.1	1690.9
D	07/01/75	03:50	7.74	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:26	8.28	0.0	0.0	120.8	603.9	724.7
D	07/01/75	04:30	7.92	0.0	0.0	378.8	0.0	378.8
I	07/01/75	05:08	8.19	0.0	0.0	122.1	0.0	122.1
D	07/01/75	05:21	7.92	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:57	7.38	0.0	0.0	271.0	0.0	271.0
D	07/01/75	06:00	7.20	0.0	0.0	277.8	0.0	277.8
I	07/01/75	06:37	8.10	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:40	7.47	0.0	0.0	0.0	0.0	0.0
I	07/01/75	20:35	6.93	0.0	0.0	0.0	0.0	0.0
D	07/01/75	20:40	8.28	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:20	8.46	0.0	0.0	0.0	118.2	118.2
D	07/01/75	21:17	7.56	0.0	0.0	0.0	0.0	0.0
I	07/01/75	22:18	7.92	0.0	0.0	0.0	252.5	252.5
D	07/01/75	22:17	7.92	0.0	0.0	126.3	0.0	126.3
I	07/01/75	23:31	7.56	0.0	0.0	132.3	264.6	396.9
D	07/01/75	23:29	8.28	0.0	0.0	0.0	0.0	0.0
I	07/02/75	00:13	7.92	0.0	0.0	378.8	378.8	757.6
D	07/02/75	00:13	7.02	0.0	0.0	285.0	0.0	285.0
I	07/02/75	01:00	7.20	0.0	0.0	0.0	555.6	555.6
D	07/02/75	01:00	7.92	0.0	0.0	126.3	252.5	378.8
I	07/02/75	01:44	6.66	0.0	0.0	300.3	450.5	750.8
D	07/02/75	01:48	7.56	0.0	0.0	132.3	0.0	132.3
I	07/02/75	02:40	7.47	0.0	0.0	0.0	133.9	133.9
D	07/02/75	02:41	8.28	0.0	0.0	120.8	0.0	120.8
I	07/02/75	03:22	8.19	0.0	0.0	0.0	0.0	0.0
D	07/02/75	03:32	7.92	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/02/75	04:14	8.28	0.0	0.0	362.3	1207.7	1570.0
D	07/02/75	04:20	7.20	0.0	0.0	138.9	0.0	138.9
I	07/02/75	05:01	7.83	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:04	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:37	8.55	0.0	0.0	0.0	117.0	117.0
D	07/02/75	05:40	7.92	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:35	8.37	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:34	7.20	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:49	8.64	0.0	0.0	0.0	115.7	115.7
D	07/07/75	20:36	7.02	0.0	0.0	142.5	0.0	142.5
I	07/07/75	21:55	7.74	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:41	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:40	7.20	0.0	0.0	0.0	138.9	138.9
D	07/07/75	22:34	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:35	7.38	0.0	0.0	135.5	0.0	135.5
D	07/07/75	23:30	7.20	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:21	6.84	0.0	0.0	0.0	0.0	0.0
D	07/08/75	00:18	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:04	7.74	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:02	7.11	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:51	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:50	6.84	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:38	7.56	0.0	0.0	0.0	132.3	132.3
D	07/08/75	02:33	7.92	0.0	0.0	0.0	126.3	126.3
I	07/08/75	03:31	7.20	0.0	0.0	138.9	0.0	138.9
D	07/08/75	03:22	7.56	0.0	0.0	0.0	132.3	132.3
I	07/08/75	04:18	7.20	0.0	0.0	0.0	555.6	555.6
D	07/08/75	04:15	8.10	0.0	0.0	0.0	493.8	493.8
I	07/08/75	05:23	7.38	0.0	0.0	135.5	271.0	406.5
D	07/08/75	05:15	7.56	0.0	0.0	0.0	396.8	396.8
I	07/08/75	06:09	7.29	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/08/75	06:07	7.56	0.0	0.0	0.0	264.6	264.6
I	07/08/75	06:52	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	06:51	7.56	0.0	0.0	0.0	132.3	132.3
I	07/14/75	20:41	6.65	0.0	0.0	0.0	0.0	0.0
D	07/14/75	20:45	8.10	0.0	0.0	0.0	0.0	0.0
I	07/14/75	22:06	6.84	0.0	0.0	0.0	146.2	146.2
D	07/14/75	22:05	7.92	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:05	7.20	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:02	8.10	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:53	7.56	0.0	0.0	0.0	396.8	396.8
D	07/14/75	23:55	7.92	0.0	0.0	0.0	0.0	0.0
I	07/15/75	00:44	7.20	0.0	0.0	0.0	138.9	138.9
D	07/15/75	00:39	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	01:37	8.28	0.0	0.0	0.0	0.0	0.0
D	07/15/75	01:42	7.56	0.0	0.0	0.0	0.0	0.0
I	07/15/75	02:34	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	02:40	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	03:23	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	03:25	7.92	0.0	0.0	0.0	0.0	0.0
I	07/15/75	04:34	7.56	0.0	0.0	0.0	0.0	0.0
D	07/15/75	04:10	8.28	0.0	0.0	0.0	0.0	0.0
I	07/15/75	05:13	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	05:13	8.19	0.0	0.0	0.0	0.0	0.0
I	07/15/75	06:03	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	05:53	8.28	0.0	0.0	0.0	120.8	120.8
I	07/21/75	14:40	6.65	0.0	0.0	0.0	0.0	0.0
D	07/21/75	14:33	7.02	0.0	0.0	0.0	0.0	0.0
I	07/21/75	15:30	7.47	0.0	0.0	0.0	0.0	0.0
D	07/21/75	15:32	7.20	0.0	0.0	0.0	0.0	0.0
I	07/21/75	16:13	6.84	0.0	0.0	0.0	0.0	0.0
D	07/21/75	16:15	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/21/75	16:53	7.56	0.0	0.0	0.0	0.0	0.0
D	07/21/75	17:00	6.84	0.0	0.0	0.0	0.0	0.0
I	07/21/75	17:35	7.38	0.0	0.0	0.0	0.0	0.0
D	07/21/75	17:45	8.28	0.0	0.0	0.0	0.0	0.0
I	07/21/75	18:22	7.74	0.0	0.0	0.0	0.0	0.0
D	07/21/75	18:27	8.28	0.0	0.0	0.0	0.0	0.0
I	07/21/75	19:00	7.56	0.0	0.0	0.0	0.0	0.0
D	07/21/75	19:00	7.20	0.0	0.0	0.0	0.0	0.0
I	07/21/75	19:50	8.46	0.0	0.0	0.0	0.0	0.0
D	07/21/75	19:51	7.38	0.0	0.0	0.0	0.0	0.0
I	07/21/75	20:31	6.66	0.0	0.0	0.0	0.0	0.0
D	07/21/75	20:30	7.56	0.0	0.0	0.0	0.0	0.0
I	07/21/75	21:10	6.93	0.0	0.0	0.0	144.3	144.3
D	07/21/75	21:05	7.20	0.0	0.0	0.0	0.0	0.0
I	07/23/75	04:28	7.02	0.0	0.0	0.0	0.0	0.0
D	07/23/75	04:26	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	05:12	7.78	0.0	0.0	0.0	0.0	0.0
D	07/23/75	05:14	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	05:51	7.78	0.0	0.0	0.0	0.0	0.0
D	07/23/75	06:07	7.25	0.0	0.0	0.0	0.0	0.0
I	07/23/75	06:45	7.51	0.0	0.0	0.0	0.0	0.0
D	07/23/75	06:40	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	07:30	7.60	0.0	0.0	0.0	0.0	0.0
D	07/23/75	07:33	7.42	0.0	0.0	0.0	0.0	0.0
I	07/23/75	08:10	7.69	0.0	0.0	0.0	0.0	0.0
D	07/23/75	08:09	7.78	0.0	0.0	0.0	0.0	0.0
I	07/23/75	08:47	7.24	0.0	0.0	0.0	0.0	0.0
D	07/23/75	08:50	7.24	0.0	0.0	0.0	0.0	0.0
I	07/23/75	09:24	8.10	0.0	0.0	0.0	0.0	0.0
D	07/23/75	09:27	7.56	0.0	0.0	0.0	0.0	0.0
I	07/23/75	10:00	8.28	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

CLUPEIDAE DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	09/08/75	20:20	6.84	0.0	0.0	0.0	0.0	0.0
D	09/08/75	20:13	6.84	0.0	0.0	0.0	0.0	0.0
I	09/08/75	21:05	7.38	0.0	0.0	0.0	0.0	0.0
D	09/08/75	21:05	6.84	0.0	0.0	0.0	0.0	0.0
I	09/16/75	19:10	7.74	0.0	0.0	0.0	0.0	0.0
D	09/16/75	19:15	7.65	0.0	0.0	0.0	0.0	0.0
I	09/16/75	20:25	6.48	0.0	0.0	0.0	0.0	0.0
D	09/16/75	20:15	7.92	0.0	0.0	0.0	0.0	0.0
I	09/16/75	21:30	6.66	0.0	0.0	0.0	0.0	0.0
D	09/16/75	21:25	7.47	0.0	0.0	0.0	0.0	0.0
I	09/22/75	19:09	7.38	0.0	0.0	0.0	0.0	0.0
D	09/22/75	18:54	7.92	0.0	0.0	0.0	0.0	0.0
I	09/22/75	20:00	7.02	0.0	0.0	0.0	0.0	0.0
D	09/22/75	19:55	7.38	0.0	0.0	0.0	0.0	0.0
I	09/22/75	21:05	7.38	0.0	0.0	0.0	0.0	0.0
D	09/22/75	21:01	7.65	0.0	0.0	0.0	0.0	0.0
I	10/13/75	19:05	6.73	0.0	0.0	0.0	297.2	297.2
D	10/13/75	19:02	7.78	0.0	0.0	0.0	128.5	128.5
I	10/13/75	20:05	8.14	0.0	0.0	0.0	122.9	122.9
D	10/13/75	20:15	7.43	0.0	0.0	0.0	0.0	0.0
I	10/13/75	21:00	8.14	0.0	0.0	0.0	122.9	122.9
D	10/13/75	21:08	8.14	0.0	0.0	0.0	122.9	122.9
I	10/28/75	18:47	7.68	0.0	0.0	0.0	0.0	0.0
D	10/28/75	18:35	8.14	0.0	0.0	0.0	0.0	0.0
I	10/28/75	19:35	6.90	0.0	0.0	0.0	0.0	0.0
D	10/28/75	19:30	7.61	0.0	0.0	0.0	0.0	0.0
I	10/28/75	20:53	7.68	0.0	0.0	0.0	0.0	0.0
D	10/28/75	21:00	6.73	0.0	0.0	0.0	0.0	0.0
I	11/03/75	18:35	6.73	0.0	0.0	0.0	0.0	0.0
D	11/03/75	18:35	7.35	0.0	0.0	0.0	0.0	0.0
I	11/03/75	19:45	8.14	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/02/75	04:14	8.28	0.0	0.0	0.0	0.0	0.0
D	07/02/75	04:20	7.20	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:01	7.83	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:04	7.02	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:37	8.55	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:40	7.92	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:35	8.37	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:34	7.20	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:49	8.64	0.0	0.0	0.0	0.0	0.0
D	07/07/75	20:36	7.02	0.0	0.0	0.0	0.0	0.0
I	07/07/75	21:55	7.74	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:41	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:40	7.20	0.0	0.0	0.0	0.0	0.0
D	07/07/75	22:34	7.92	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:35	7.38	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:30	7.20	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:21	6.84	0.0	0.0	0.0	0.0	0.0
D	07/08/75	00:18	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:04	7.74	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:02	7.11	0.0	0.0	0.0	140.6	140.6
I	07/08/75	01:51	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:50	6.84	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:38	7.56	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:33	7.92	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:31	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	03:22	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	04:18	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:15	8.10	0.0	0.0	0.0	0.0	0.0
I	07/08/75	05:23	7.38	0.0	0.0	0.0	0.0	0.0
D	07/08/75	05:15	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:09	7.29	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/08/75	06:07	7.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:52	7.20	0.0	0.0	0.0	0.0	0.0
D	07/08/75	06:51	7.56	0.0	0.0	0.0	0.0	0.0
I	07/14/75	20:41	6.66	0.0	0.0	0.0	0.0	0.0
D	07/14/75	20:45	8.10	0.0	0.0	0.0	0.0	0.0
I	07/14/75	22:06	6.84	0.0	0.0	0.0	0.0	0.0
D	07/14/75	22:05	7.92	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:05	7.20	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:02	8.10	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:53	7.56	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:55	7.92	0.0	0.0	0.0	0.0	0.0
I	07/15/75	00:44	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	00:39	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	01:37	8.28	0.0	0.0	0.0	0.0	0.0
D	07/15/75	01:42	7.56	0.0	0.0	0.0	0.0	0.0
I	07/15/75	02:34	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	02:40	7.20	0.0	0.0	0.0	0.0	0.0
I	07/15/75	03:23	8.64	0.0	0.0	0.0	0.0	0.0
D	07/15/75	03:25	7.92	0.0	0.0	0.0	0.0	0.0
I	07/15/75	04:34	7.56	0.0	0.0	0.0	0.0	0.0
D	07/15/75	04:10	8.28	0.0	0.0	0.0	0.0	0.0
I	07/15/75	05:13	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	05:13	8.19	0.0	0.0	0.0	0.0	0.0
I	07/15/75	06:03	7.20	0.0	0.0	0.0	0.0	0.0
D	07/15/75	05:53	8.28	0.0	0.0	0.0	0.0	0.0
I	07/21/75	14:49	6.66	0.0	0.0	0.0	0.0	0.0
D	07/21/75	14:33	7.02	0.0	0.0	142.5	0.0	142.5
I	07/21/75	15:30	7.47	0.0	0.0	267.7	0.0	267.7
D	07/21/75	15:32	7.20	0.0	0.0	0.0	0.0	0.0
I	07/21/75	16:13	6.84	0.0	0.0	0.0	0.0	0.0
D	07/21/75	16:15	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/21/75	16:53	7.56	0.0	0.0	0.0	0.0	0.0
D	07/21/75	17:00	6.84	0.0	0.0	146.2	0.0	146.2
I	07/21/75	17:35	7.38	0.0	0.0	0.0	0.0	0.0
D	07/21/75	17:45	8.28	0.0	0.0	120.8	0.0	120.8
I	07/21/75	18:22	7.74	0.0	0.0	0.0	0.0	0.0
D	07/21/75	18:27	8.28	0.0	0.0	0.0	0.0	0.0
I	07/21/75	19:00	7.56	0.0	0.0	0.0	0.0	0.0
D	07/21/75	19:00	7.20	0.0	0.0	0.0	0.0	0.0
I	07/21/75	19:50	8.46	0.0	0.0	0.0	0.0	0.0
D	07/21/75	19:51	7.38	0.0	0.0	0.0	0.0	0.0
I	07/21/75	20:31	6.66	0.0	0.0	0.0	0.0	0.0
D	07/21/75	20:30	7.56	0.0	0.0	0.0	0.0	0.0
I	07/21/75	21:10	6.93	0.0	0.0	0.0	0.0	0.0
D	07/21/75	21:05	7.20	0.0	0.0	0.0	0.0	0.0
I	07/23/75	04:28	7.02	0.0	0.0	0.0	0.0	0.0
D	07/23/75	04:26	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	05:12	7.78	0.0	0.0	0.0	0.0	0.0
D	07/23/75	05:14	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	05:51	7.78	0.0	0.0	0.0	0.0	0.0
D	07/23/75	06:07	7.25	0.0	0.0	0.0	0.0	0.0
I	07/23/75	06:45	7.51	0.0	0.0	0.0	0.0	0.0
D	07/23/75	06:40	6.72	0.0	0.0	0.0	0.0	0.0
I	07/23/75	07:30	7.60	0.0	0.0	0.0	0.0	0.0
D	07/23/75	07:33	7.42	0.0	0.0	134.8	0.0	134.8
I	07/23/75	08:10	7.69	0.0	0.0	0.0	0.0	0.0
D	07/23/75	08:09	7.78	0.0	0.0	0.0	0.0	0.0
I	07/23/75	08:47	7.24	0.0	0.0	0.0	0.0	0.0
D	07/23/75	08:50	7.24	0.0	0.0	0.0	0.0	0.0
I	07/23/75	09:24	8.10	0.0	0.0	0.0	0.0	0.0
D	07/23/75	09:27	7.56	0.0	0.0	0.0	0.0	0.0
I	07/23/75	10:00	8.28	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/23/75	10:04	6.84	0.0	0.0	0.0	0.0	0.0
I	07/23/75	10:43	8.28	0.0	0.0	0.0	0.0	0.0
D	07/23/75	10:39	6.84	0.0	0.0	0.0	0.0	0.0
I	07/23/75	11:20	8.10	0.0	0.0	0.0	0.0	0.0
I	07/28/75	14:48	8.01	0.0	0.0	0.0	0.0	0.0
D	07/28/75	14:42	7.56	0.0	0.0	0.0	0.0	0.0
I	07/28/75	15:33	8.28	0.0	0.0	0.0	0.0	0.0
D	07/28/75	15:35	8.28	0.0	0.0	0.0	0.0	0.0
I	07/28/75	16:23	7.56	0.0	0.0	0.0	0.0	0.0
D	07/28/75	16:15	8.10	0.0	0.0	0.0	0.0	0.0
I	07/28/75	17:08	7.65	0.0	0.0	0.0	0.0	0.0
D	07/28/75	17:12	7.92	0.0	0.0	0.0	0.0	0.0
I	07/28/75	17:45	6.93	0.0	0.0	144.3	0.0	144.3
D	07/28/75	18:00	7.38	0.0	0.0	0.0	0.0	0.0
I	07/28/75	18:30	8.46	0.0	0.0	0.0	0.0	0.0
D	07/28/75	18:35	7.56	0.0	0.0	0.0	0.0	0.0
I	07/28/75	19:05	7.56	0.0	0.0	0.0	0.0	0.0
D	07/28/75	19:10	7.20	0.0	0.0	0.0	0.0	0.0
I	07/28/75	19:40	7.38	0.0	0.0	0.0	0.0	0.0
D	07/28/75	19:35	7.20	0.0	0.0	0.0	0.0	0.0
I	07/28/75	20:20	6.84	0.0	0.0	0.0	0.0	0.0
D	07/28/75	20:20	7.56	0.0	0.0	0.0	0.0	0.0
I	07/28/75	21:08	7.74	0.0	0.0	0.0	0.0	0.0
D	07/28/75	21:00	7.56	0.0	0.0	0.0	0.0	0.0
I	07/30/75	04:37	7.92	0.0	0.0	0.0	0.0	0.0
D	07/30/75	04:40	8.10	0.0	0.0	0.0	0.0	0.0
I	07/30/75	05:20	8.46	0.0	0.0	0.0	0.0	0.0
D	07/30/75	05:20	8.28	0.0	0.0	0.0	0.0	0.0
I	07/30/75	05:55	7.38	0.0	0.0	0.0	0.0	0.0
D	07/30/75	05:55	7.92	0.0	0.0	0.0	0.0	0.0
I	07/30/75	06:35	8.10	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	08/04/75	20:25	8.28	0.0	0.0	0.0	0.0	0.0
D	08/04/75	20:28	7.20	0.0	0.0	0.0	0.0	0.0
I	08/04/75	20:55	7.92	0.0	0.0	126.3	0.0	126.3
D	08/04/75	21:07	7.02	0.0	0.0	0.0	0.0	0.0
I	08/05/75	04:39	8.28	0.0	0.0	0.0	0.0	0.0
D	08/05/75	04:50	7.56	0.0	0.0	0.0	132.3	132.3
I	08/05/75	05:25	7.56	0.0	0.0	0.0	0.0	0.0
D	08/05/75	05:45	6.84	0.0	0.0	0.0	0.0	0.0
I	08/05/75	06:35	8.10	0.0	0.0	0.0	0.0	0.0
D	08/05/75	06:34	7.38	0.0	0.0	0.0	0.0	0.0
I	08/05/75	07:15	7.65	0.0	0.0	0.0	0.0	0.0
D	08/05/75	07:16	7.56	0.0	0.0	0.0	0.0	0.0
I	08/05/75	08:04	7.56	0.0	0.0	0.0	0.0	0.0
D	08/05/75	08:05	8.10	0.0	0.0	0.0	0.0	0.0
I	08/05/75	08:41	8.46	0.0	0.0	0.0	0.0	0.0
D	08/05/75	08:42	8.28	0.0	0.0	0.0	0.0	0.0
I	08/05/75	09:27	8.28	0.0	0.0	0.0	0.0	0.0
D	08/05/75	09:30	7.56	0.0	0.0	0.0	0.0	0.0
I	08/05/75	10:05	7.56	0.0	0.0	0.0	0.0	0.0
D	08/05/75	10:09	7.74	0.0	0.0	0.0	0.0	0.0
I	08/05/75	10:54	7.56	0.0	0.0	0.0	0.0	0.0
D	08/05/75	11:01	7.56	0.0	0.0	0.0	0.0	0.0
I	08/11/75	14:46	8.28	0.0	0.0	0.0	0.0	0.0
D	08/11/75	14:45	7.56	0.0	0.0	132.3	0.0	132.3
I	08/11/75	15:32	8.46	0.0	0.0	0.0	0.0	0.0
D	08/11/75	15:32	7.92	0.0	0.0	0.0	0.0	0.0
I	08/11/75	16:20	7.38	0.0	0.0	135.5	0.0	135.5
D	08/11/75	16:20	7.56	0.0	0.0	0.0	0.0	0.0
I	08/11/75	17:09	7.38	0.0	0.0	0.0	0.0	0.0
D	08/11/75	17:15	8.10	0.0	0.0	123.5	0.0	123.5
I	08/11/75	18:11	8.36	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	08/11/75	18:12	8.28	0.0	0.0	362.3	0.0	362.3
I	08/11/75	18:55	7.11	0.0	0.0	0.0	0.0	0.0
D	08/11/75	18:55	7.74	0.0	0.0	258.4	0.0	258.4
I	08/11/75	19:34	7.83	0.0	0.0	0.0	0.0	0.0
D	08/11/75	19:35	7.38	0.0	0.0	0.0	0.0	0.0
I	08/11/75	20:15	7.56	0.0	0.0	0.0	0.0	0.0
D	08/11/75	20:22	6.84	0.0	0.0	438.6	0.0	438.6
I	08/11/75	21:01	7.11	0.0	0.0	0.0	0.0	0.0
D	08/11/75	21:08	7.92	0.0	0.0	0.0	0.0	0.0
I	08/13/75	05:00	7.74	0.0	0.0	0.0	0.0	0.0
D	08/13/75	04:45	7.74	0.0	0.0	258.4	0.0	258.4
I	08/13/75	05:38	8.55	0.0	0.0	0.0	0.0	0.0
D	08/13/75	05:45	8.37	0.0	0.0	0.0	0.0	0.0
I	08/13/75	06:31	7.11	0.0	0.0	0.0	0.0	0.0
D	08/13/75	06:32	8.10	0.0	0.0	0.0	123.5	123.5
I	08/13/75	07:38	7.11	0.0	0.0	0.0	0.0	0.0
D	08/13/75	07:25	7.20	0.0	0.0	0.0	0.0	0.0
I	08/13/75	08:20	7.38	0.0	0.0	0.0	0.0	0.0
D	08/13/75	08:25	7.92	0.0	0.0	0.0	0.0	0.0
I	08/13/75	09:05	6.84	0.0	0.0	0.0	0.0	0.0
D	08/13/75	09:05	8.46	0.0	0.0	0.0	0.0	0.0
I	08/13/75	09:51	7.74	0.0	0.0	0.0	0.0	0.0
D	08/13/75	10:00	7.20	0.0	0.0	0.0	0.0	0.0
I	08/13/75	10:40	7.38	0.0	0.0	0.0	0.0	0.0
D	08/13/75	10:43	7.56	0.0	0.0	132.3	0.0	132.3
I	08/18/75	17:15	7.20	0.0	0.0	0.0	0.0	0.0
D	08/18/75	17:05	7.65	0.0	0.0	261.4	0.0	261.4
I	08/18/75	17:58	8.19	0.0	0.0	0.0	0.0	0.0
D	08/18/75	18:00	7.38	0.0	0.0	0.0	0.0	0.0
I	08/18/75	18:40	8.28	0.0	0.0	241.5	0.0	241.5
D	08/18/75	18:40	8.10	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	08/18/75	19:20	8.28	0.0	0.0	0.0	0.0	0.0
D	08/18/75	19:25	8.10	0.0	0.0	0.0	0.0	0.0
I	08/18/75	20:15	7.20	0.0	0.0	0.0	0.0	0.0
D	08/18/75	20:15	8.28	0.0	0.0	0.0	0.0	0.0
I	08/18/75	21:15	7.56	0.0	0.0	0.0	0.0	0.0
D	08/18/75	21:15	7.92	0.0	0.0	0.0	0.0	0.0
I	08/18/75	22:00	8.01	0.0	0.0	0.0	0.0	0.0
D	08/18/75	22:00	7.29	0.0	0.0	0.0	0.0	0.0
I	08/18/75	22:50	7.74	0.0	0.0	0.0	0.0	0.0
D	08/18/75	22:50	7.56	0.0	0.0	0.0	0.0	0.0
I	08/19/75	16:40	7.02	0.0	0.0	142.5	0.0	142.5
D	08/19/75	16:35	7.74	0.0	0.0	0.0	0.0	0.0
I	08/19/75	17:33	7.65	0.0	0.0	0.0	0.0	0.0
D	08/19/75	17:30	7.02	0.0	0.0	0.0	0.0	0.0
I	08/19/75	18:13	7.29	0.0	0.0	0.0	0.0	0.0
D	08/19/75	18:12	7.02	0.0	0.0	284.9	0.0	284.9
I	08/19/75	18:54	7.74	0.0	0.0	0.0	0.0	0.0
D	08/19/75	18:50	8.28	0.0	0.0	0.0	0.0	0.0
I	08/19/75	19:31	7.92	0.0	0.0	0.0	0.0	0.0
D	08/19/75	19:28	7.65	0.0	0.0	0.0	0.0	0.0
I	08/19/75	20:10	8.28	0.0	0.0	0.0	0.0	0.0
D	08/19/75	20:10	7.74	0.0	0.0	0.0	0.0	0.0
I	08/19/75	21:10	8.28	0.0	0.0	0.0	0.0	0.0
D	08/19/75	21:12	8.28	0.0	0.0	0.0	0.0	0.0
I	08/19/75	22:05	7.20	0.0	0.0	0.0	0.0	0.0
D	08/19/75	22:00	8.28	0.0	0.0	0.0	0.0	0.0
I	08/19/75	23:01	7.20	0.0	0.0	0.0	0.0	0.0
D	08/19/75	23:00	7.02	0.0	0.0	0.0	0.0	0.0
I	08/25/75	16:55	7.20	0.0	0.0	0.0	0.0	0.0
D	08/25/75	16:50	7.92	0.0	0.0	0.0	0.0	0.0
I	08/25/75	17:40	8.28	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	08/25/75	17:33	7.65	0.0	0.0	0.0	0.0	0.0
I	08/25/75	18:28	8.28	0.0	0.0	0.0	0.0	0.0
D	08/25/75	18:20	7.74	0.0	0.0	0.0	0.0	0.0
I	08/25/75	19:10	7.56	0.0	0.0	0.0	0.0	0.0
D	08/25/75	18:50	7.92	0.0	0.0	126.3	0.0	126.3
I	08/25/75	20:05	7.02	0.0	0.0	0.0	0.0	0.0
D	08/25/75	20:10	7.47	0.0	0.0	133.9	0.0	133.9
I	08/25/75	21:00	7.20	0.0	0.0	138.9	0.0	138.9
D	08/25/75	21:05	7.29	0.0	0.0	0.0	0.0	0.0
I	08/25/75	21:53	6.84	0.0	0.0	0.0	0.0	0.0
D	08/25/75	21:57	7.56	0.0	0.0	264.6	0.0	264.6
I	08/25/75	22:55	8.28	0.0	0.0	0.0	0.0	0.0
D	08/25/75	23:10	8.28	0.0	0.0	120.8	0.0	120.8
I	08/26/75	16:33	7.74	0.0	0.0	0.0	0.0	0.0
D	08/26/75	16:28	7.38	0.0	0.0	0.0	0.0	0.0
I	08/26/75	17:21	7.56	0.0	0.0	0.0	0.0	0.0
D	08/26/75	17:22	7.20	0.0	0.0	0.0	0.0	0.0
I	08/26/75	18:11	7.56	0.0	0.0	0.0	0.0	0.0
D	08/26/75	18:16	8.28	0.0	0.0	0.0	0.0	0.0
I	08/26/75	19:04	6.84	0.0	0.0	0.0	0.0	0.0
D	08/26/75	19:05	7.56	0.0	0.0	0.0	0.0	0.0
I	08/26/75	19:51	7.92	0.0	0.0	0.0	0.0	0.0
D	08/26/75	19:52	7.20	0.0	0.0	0.0	0.0	0.0
I	08/26/75	20:50	7.20	0.0	0.0	0.0	0.0	0.0
D	08/26/75	20:50	6.84	0.0	0.0	0.0	0.0	0.0
I	08/26/75	21:40	7.56	0.0	0.0	0.0	0.0	0.0
D	08/26/75	21:38	7.38	0.0	0.0	0.0	0.0	0.0
I	08/26/75	22:35	7.38	0.0	0.0	0.0	0.0	0.0
D	08/26/75	22:36	7.56	0.0	0.0	0.0	0.0	0.0
I	09/08/75	18:20	8.28	0.0	0.0	0.0	0.0	0.0
D	09/08/75	19:17	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

2.2 DANSKAMMER POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/09/75	22:30	7.86	0.0	0.0	0.0	0.0	0.0
D	05/09/75	22:29	8.26	0.0	0.0	242.1	0.0	242.1
I	05/10/75	00:09	7.79	0.0	0.0	129.9	0.0	129.9
D	05/10/75	00:09	6.90	0.0	0.0	434.8	0.0	434.8
I	05/10/75	01:38	7.61	0.0	0.0	394.2	0.0	394.2
D	05/10/75	01:51	8.53	0.0	0.0	351.7	0.0	351.7
I	05/10/75	03:10	7.00	0.0	0.0	571.4	0.0	571.4
D	05/10/75	03:15	7.26	0.0	0.0	1652.9	0.0	1652.9
I	05/10/75	04:40	7.18	0.0	0.0	139.3	0.0	139.3
I	05/10/75	04:30	6.90	0.0	0.0	724.6	0.0	724.6
I	05/10/75	05:40	7.88	0.0	0.0	0.0	0.0	0.0
D	05/10/75	05:42	7.44	0.0	0.0	403.2	0.0	403.2
I	05/10/75	22:10	8.15	0.0	0.0	0.0	0.0	0.0
D	05/10/75	22:00	7.17	0.0	0.0	557.8	0.0	557.8
I	05/10/75	23:20	6.83	0.0	0.0	146.4	0.0	146.4
D	05/10/75	23:25	8.35	0.0	0.0	239.5	0.0	239.5
I	05/11/75	00:35	7.53	0.0	0.0	398.4	0.0	398.4
D	05/11/75	00:35	8.71	0.0	0.0	0.0	0.0	0.0
I	05/11/75	01:55	7.35	0.0	0.0	0.0	0.0	0.0
D	05/11/75	01:51	7.80	0.0	0.0	128.2	0.0	128.2
I	05/11/75	03:10	6.83	0.0	0.0	0.0	0.0	0.0
D	05/11/75	03:14	7.90	0.0	0.0	126.6	0.0	126.6
I	05/11/75	04:28	7.88	0.0	0.0	380.7	0.0	380.7
D	05/11/75	04:28	8.44	0.0	0.0	592.4	0.0	592.4
I	05/11/75	05:44	7.88	0.0	0.0	634.5	0.0	634.5
D	05/11/75	05:41	7.99	0.0	0.0	500.6	0.0	500.6
I	05/11/75	22:10	6.83	0.0	0.0	146.4	0.0	146.4
D	05/11/75	22:10	7.98	0.0	0.0	0.0	0.0	0.0
I	05/11/75	23:15	7.79	0.0	0.0	256.7	0.0	256.7
D	05/11/75	23:16	8.53	0.0	0.0	0.0	0.0	0.0
I	05/12/75	00:34	6.83	0.0	0.0	146.4	0.0	146.4

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/12/75	00:27	8.35	0.0	0.0	359.3	0.0	359.3
I	06/12/75	02:03	7.88	0.0	0.0	126.9	0.0	126.9
D	06/12/75	02:00	7.44	0.0	0.0	0.0	0.0	0.0
I	06/12/75	03:25	7.00	0.0	0.0	142.9	0.0	142.9
D	06/12/75	03:25	7.81	0.0	0.0	0.0	0.0	0.0
I	06/12/75	04:39	7.16	0.0	0.0	139.7	0.0	139.7
D	06/12/75	04:37	6.72	0.0	0.0	0.0	0.0	0.0
I	06/12/75	05:50	7.70	0.0	0.0	259.7	0.0	259.7
D	06/12/75	05:48	8.17	0.0	0.0	122.4	0.0	122.4
I	06/12/75	21:18	7.35	0.0	0.0	272.1	0.0	272.1
D	06/12/75	21:15	7.90	0.0	0.0	126.6	0.0	126.6
I	06/12/75	23:14	7.70	0.0	0.0	0.0	0.0	0.0
D	06/12/75	23:05	7.72	0.0	0.0	388.6	0.0	388.6
I	06/13/75	00:10	7.35	0.0	0.0	0.0	0.0	0.0
D	06/13/75	00:05	6.90	0.0	0.0	144.9	0.0	144.9
I	06/13/75	01:05	6.48	0.0	0.0	0.0	0.0	0.0
D	06/13/75	01:13	7.53	0.0	0.0	265.6	0.0	265.6
I	06/13/75	02:39	7.96	0.0	0.0	0.0	0.0	0.0
D	06/13/75	02:36	7.71	0.0	0.0	0.0	0.0	0.0
I	06/13/75	03:55	7.00	0.0	0.0	0.0	0.0	0.0
D	06/13/75	03:49	8.17	0.0	0.0	0.0	0.0	0.0
I	06/13/75	05:03	7.70	0.0	0.0	0.0	0.0	0.0
D	06/13/75	05:07	7.53	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:18	6.83	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:10	8.26	0.0	0.0	0.0	0.0	0.0
I	06/16/75	23:25	7.35	0.0	0.0	0.0	0.0	0.0
D	06/16/75	23:15	7.62	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:25	6.64	0.0	0.0	0.0	0.0	0.0
D	06/17/75	00:15	7.44	0.0	0.0	134.4	0.0	134.4
I	06/17/75	01:15	7.35	0.0	0.0	0.0	0.0	0.0
D	06/17/75	01:20	7.44	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/17/75	02:10	8.05	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:19	7.26	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:17	8.05	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:25	8.35	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:17	6.65	0.0	0.0	0.0	0.0	0.0
D	06/17/75	04:10	8.62	0.0	0.0	116.0	0.0	116.0
I	06/17/75	04:58	6.83	0.0	0.0	146.4	0.0	146.4
D	06/17/75	05:00	7.62	0.0	0.0	131.2	0.0	131.2
I	06/17/75	22:05	7.35	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:04	7.44	0.0	0.0	0.0	0.0	0.0
I	06/17/75	23:28	7.53	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:10	6.72	0.0	0.0	0.0	148.8	148.8
I	06/18/75	00:48	6.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	99:16	6.88	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:35	8.05	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:44	6.90	0.0	0.0	0.0	0.0	0.0
I	06/18/75	02:44	7.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	02:40	6.72	0.0	0.0	0.0	0.0	0.0
I	06/18/75	03:50	8.05	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:43	8.53	0.0	0.0	0.0	0.0	0.0
I	06/18/75	04:45	7.53	0.0	0.0	0.0	0.0	0.0
D	06/18/75	04:40	7.99	0.0	0.0	0.0	0.0	0.0
I	06/18/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	06/18/75	05:27	8.35	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:04	7.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:58	7.26	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:55	7.18	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:55	7.99	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:41	7.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	23:50	6.90	0.0	0.0	0.0	0.0	0.0
I	06/19/75	00:39	7.53	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D		06/19/75	00:33	6.72	0.0	0.0	0.0	0.0	0.0
I		06/19/75	01:21	7.68	0.0	0.0	0.0	0.0	0.0
D		06/19/75	01:25	6.90	0.0	0.0	0.0	0.0	0.0
I		06/19/75	02:21	7.00	0.0	0.0	0.0	0.0	0.0
D		06/19/75	02:12	6.72	0.0	0.0	0.0	0.0	0.0
I		06/19/75	03:21	7.53	0.0	0.0	0.0	0.0	0.0
D		06/19/75	03:20	8.17	0.0	0.0	122.4	0.0	122.4
I		06/19/75	04:18	7.35	0.0	0.0	0.0	0.0	0.0
D		06/19/75	04:27	7.44	0.0	0.0	0.0	134.4	134.4
I		06/19/75	05:50	7.68	0.0	0.0	0.0	0.0	0.0
D		06/19/75	05:23	7.53	0.0	0.0	0.0	0.0	0.0
I		06/19/75	21:57	7.53	0.0	0.0	0.0	0.0	0.0
D		06/19/75	22:23	8.62	0.0	0.0	0.0	0.0	0.0
I		06/19/75	23:07	7.68	0.0	0.0	0.0	0.0	0.0
D		06/19/75	23:16	7.99	0.0	0.0	0.0	0.0	0.0
I		06/20/75	00:00	7.53	0.0	0.0	0.0	0.0	0.0
D		06/20/75	00:00	6.90	0.0	0.0	0.0	0.0	0.0
I		06/20/75	00:50	7.09	0.0	0.0	0.0	0.0	0.0
D		06/20/75	00:40	8.35	0.0	0.0	0.0	0.0	0.0
I		06/20/75	01:43	7.35	0.0	0.0	0.0	0.0	0.0
D		06/20/75	01:31	6.90	0.0	0.0	0.0	0.0	0.0
I		06/20/75	02:21	7.70	0.0	0.0	0.0	0.0	0.0
D		06/20/75	02:20	8.86	0.0	0.0	0.0	0.0	0.0
I		06/23/75	22:28	6.83	0.0	0.0	0.0	0.0	0.0
D		06/23/75	22:45	7.26	0.0	0.0	0.0	0.0	0.0
I		06/23/75	23:45	7.18	0.0	0.0	0.0	0.0	0.0
D		06/23/75	23:31	8.18	0.0	0.0	0.0	0.0	0.0
I		06/24/75	00:35	7.70	0.0	0.0	0.0	0.0	0.0
D		06/24/75	00:30	6.81	0.0	0.0	0.0	0.0	0.0
I		06/24/75	01:25	7.70	0.0	0.0	0.0	0.0	0.0
D		06/24/75	01:22	7.90	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/24/75	02:17	7.88	0.0	0.0	0.0	0.0	0.0
D	05/24/75	02:15	7.44	0.0	0.0	0.0	0.0	0.0
I	05/24/75	03:10	7.53	0.0	0.0	0.0	0.0	0.0
D	05/24/75	03:05	7.26	0.0	0.0	0.0	0.0	0.0
I	05/24/75	03:58	6.83	0.0	0.0	0.0	0.0	0.0
D	05/24/75	04:12	8.62	0.0	0.0	0.0	0.0	0.0
I	05/24/75	04:55	7.70	0.0	0.0	0.0	0.0	0.0
D	05/24/75	04:55	6.90	0.0	0.0	0.0	0.0	0.0
I	05/24/75	05:50	8.05	0.0	0.0	0.0	0.0	0.0
D	05/24/75	05:50	6.72	0.0	0.0	0.0	0.0	0.0
I	05/24/75	21:34	8.05	0.0	0.0	0.0	0.0	0.0
D	05/24/75	21:37	7.26	0.0	0.0	0.0	0.0	0.0
I	05/24/75	22:39	6.83	0.0	0.0	0.0	0.0	0.0
D	05/24/75	22:27	6.72	0.0	0.0	0.0	0.0	0.0
I	05/24/75	23:19	7.00	0.0	0.0	142.9	0.0	142.9
D	05/24/75	23:21	7.17	0.0	0.0	0.0	0.0	0.0
I	05/25/75	00:10	7.88	0.0	0.0	0.0	0.0	0.0
D	05/25/75	00:16	6.65	0.0	0.0	0.0	0.0	0.0
I	05/25/75	01:05	6.83	0.0	0.0	0.0	0.0	0.0
D	05/25/75	01:10	8.17	0.0	0.0	122.4	0.0	122.4
I	05/25/75	02:10	7.79	0.0	0.0	0.0	0.0	0.0
D	05/25/75	02:02	7.80	0.0	0.0	0.0	0.0	0.0
I	05/25/75	02:50	7.88	0.0	0.0	0.0	0.0	0.0
D	05/25/75	02:55	8.35	0.0	0.0	0.0	0.0	0.0
I	05/25/75	03:42	7.88	0.0	0.0	0.0	0.0	0.0
D	05/25/75	03:45	7.08	0.0	0.0	0.0	0.0	0.0
I	05/25/75	04:33	7.35	0.0	0.0	0.0	0.0	0.0
D	05/25/75	04:25	7.17	0.0	0.0	0.0	0.0	0.0
I	05/25/75	05:34	7.79	0.0	0.0	0.0	0.0	0.0
D	05/25/75	05:30	8.62	0.0	0.0	0.0	0.0	0.0
I	06/25/75	22:16	7.18	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/25/75	22:00	7.44	0.0	0.0	0.0	0.0	0.0
I	06/25/75	23:10	7.70	0.0	0.0	0.0	0.0	0.0
D	06/25/75	23:32	8.08	0.0	0.0	0.0	0.0	0.0
I	06/26/75	00:23	7.00	0.0	0.0	0.0	0.0	0.0
D	06/26/75	00:20	8.17	0.0	0.0	122.4	0.0	122.4
I	06/26/75	01:35	7.00	0.0	0.0	0.0	0.0	0.0
D	06/27/75	01:36	8.17	0.0	0.0	0.0	0.0	0.0
I	06/26/75	02:43	6.65	0.0	0.0	0.0	0.0	0.0
D	06/26/75	02:50	8.62	0.0	0.0	0.0	0.0	0.0
I	06/26/75	03:50	8.05	0.0	0.0	0.0	0.0	0.0
D	06/26/75	03:50	7.99	0.0	0.0	0.0	0.0	0.0
I	06/26/75	05:03	7.00	0.0	0.0	0.0	0.0	0.0
D	06/26/75	04:45	7.80	0.0	0.0	0.0	0.0	0.0
I	06/26/75	22:06	8.05	0.0	0.0	0.0	124.2	124.2
D	06/26/75	21:42	8.53	0.0	0.0	0.0	117.2	117.2
I	06/26/75	23:11	6.83	0.0	0.0	0.0	0.0	0.0
D	06/26/75	23:16	7.17	0.0	0.0	0.0	0.0	0.0
I	06/27/75	00:20	8.05	0.0	0.0	0.0	0.0	0.0
D	06/27/75	00:19	8.62	0.0	0.0	0.0	0.0	0.0
I	06/27/75	01:33	8.15	0.0	0.0	0.0	122.7	122.7
D	06/27/75	01:31	8.53	0.0	0.0	117.2	0.0	117.2
I	06/27/75	02:25	7.70	0.0	0.0	0.0	0.0	0.0
D	06/27/75	02:36	7.80	0.0	0.0	0.0	0.0	0.0
I	06/27/75	03:34	7.53	0.0	0.0	0.0	0.0	0.0
D	06/27/75	03:37	7.99	0.0	0.0	0.0	0.0	0.0
I	06/27/75	04:39	7.53	0.0	0.0	0.0	0.0	0.0
D	06/27/75	04:40	7.99	0.0	0.0	0.0	0.0	0.0
I	06/27/75	05:40	7.53	0.0	0.0	0.0	0.0	0.0
D	06/27/75	05:35	6.72	0.0	0.0	0.0	0.0	0.0
I	06/30/75	22:12	7.53	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:10	7.17	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/30/75	23:20	7.53	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:25	6.81	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:14	7.53	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:21	8.17	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:27	8.05	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:16	7.26	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:25	7.70	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:50	6.90	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:14	8.05	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:15	7.44	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:12	8.05	0.0	0.0	0.0	0.0	0.0
D	07/01/75	04:25	7.80	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:15	8.05	0.0	0.0	0.0	0.0	0.0
D	07/01/75	05:16	8.62	0.0	0.0	0.0	0.0	0.0
I	07/01/75	06:08	7.70	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:09	7.99	0.0	0.0	0.0	0.0	0.0
I	07/01/75	20:58	7.18	0.0	0.0	0.0	0.0	0.0
D	07/01/75	20:58	8.18	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:50	8.15	0.0	0.0	0.0	0.0	0.0
D	07/01/75	21:55	7.88	0.0	0.0	0.0	0.0	0.0
I	07/01/75	22:58	7.53	0.0	0.0	132.8	0.0	132.8
D	07/01/75	22:58	6.99	0.0	0.0	143.1	0.0	143.1
I	07/01/75	23:44	8.05	0.0	0.0	0.0	0.0	0.0
D	07/01/75	23:48	7.26	0.0	0.0	0.0	0.0	0.0
I	07/02/75	00:38	7.18	0.0	0.0	0.0	0.0	0.0
D	07/02/75	00:32	8.35	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:25	7.53	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:30	6.48	0.0	0.0	0.0	0.0	0.0
I	07/02/75	02:23	7.18	0.0	0.0	0.0	0.0	0.0
D	07/02/75	02:18	8.17	0.0	0.0	0.0	0.0	0.0
I	07/02/75	03:10	8.05	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/02/75	03:10	7.00	0.0	0.0	142.9	0.0	142.9
I	07/02/75	04:03	8.05	0.0	0.0	0.0	0.0	0.0
D	07/02/75	04:00	6.99	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:15	8.05	0.0	0.0	124.2	0.0	124.2
D	07/02/75	05:05	8.53	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:03	7.88	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:00	7.99	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:51	7.70	0.0	0.0	0.0	0.0	0.0
D	07/02/75	07:00	6.81	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:52	7.53	0.0	0.0	0.0	0.0	0.0
D	07/07/75	20:50	7.62	0.0	0.0	0.0	0.0	0.0
I	07/07/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:55	8.62	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:50	7.18	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:10	6.72	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:45	6.83	0.0	0.0	146.4	0.0	146.4
D	07/08/75	00:03	7.99	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:56	7.35	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:05	7.68	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:55	7.70	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:00	7.90	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:45	8.05	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:55	7.03	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:55	7.00	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:00	7.62	0.0	0.0	0.0	131.2	131.2
I	07/08/75	04:55	7.88	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:53	7.26	0.0	0.0	0.0	137.7	137.7
I	07/08/75	05:39	7.53	0.0	0.0	0.0	0.0	0.0
D	07/08/75	05:53	7.90	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:50	8.05	0.0	0.0	0.0	0.0	0.0
D	07/08/75	06:45	7.26	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR·MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/14/75	21:43	6.65	0.0	0.0	0.0	0.0	0.0
D	07/14/75	20:44	7.90	0.0	0.0	0.0	0.0	0.0
I	07/14/75	22:36	7.00	0.0	0.0	0.0	0.0	0.0
D	07/14/75	22:50	6.62	0.0	0.0	0.0	0.0	0.0
I	07/14/75	23:45	6.85	0.0	0.0	0.0	0.0	0.0
D	07/14/75	23:58	7.26	0.0	0.0	0.0	0.0	0.0
I	07/15/75	00:55	7.44	0.0	0.0	0.0	0.0	0.0
D	07/15/75	01:00	8.17	0.0	0.0	0.0	0.0	0.0
I	07/15/75	02:14	7.53	0.0	0.0	0.0	0.0	0.0
D	07/15/75	02:05	7.90	0.0	0.0	0.0	0.0	0.0
I	07/15/75	03:14	6.83	0.0	0.0	0.0	0.0	0.0
D	07/15/75	03:12	7.88	0.0	0.0	0.0	0.0	0.0
I	07/15/75	04:19	6.65	0.0	0.0	0.0	300.8	300.8
D	07/15/75	04:13	6.90	0.0	0.0	0.0	0.0	0.0
I	07/15/75	05:15	7.70	0.0	0.0	129.9	0.0	129.9
D	07/15/75	05:20	7.68	0.0	0.0	0.0	0.0	0.0
I	07/21/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	07/21/75	14:50	6.74	0.0	0.0	0.0	0.0	0.0
I	07/21/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	07/21/75	16:30	7.44	0.0	0.0	0.0	0.0	0.0
I	07/28/75	15:05	8.05	0.0	0.0	0.0	0.0	0.0
D	07/28/75	14:45	8.34	0.0	0.0	0.0	0.0	0.0
I	08/11/75	15:09	6.83	0.0	0.0	0.0	0.0	0.0
D	08/11/75	14:50	7.80	0.0	0.0	0.0	0.0	0.0
I	08/11/75	16:01	7.18	0.0	0.0	0.0	0.0	0.0
D	08/11/75	16:05	7.88	0.0	0.0	0.0	0.0	0.0
I	08/11/75	17:14	7.53	0.0	0.0	0.0	0.0	0.0
D	08/11/75	17:10	7.53	0.0	0.0	0.0	0.0	0.0
I	08/11/75	18:02	7.53	0.0	0.0	0.0	0.0	0.0
D	08/11/75	18:02	7.53	0.0	0.0	0.0	0.0	0.0
I	08/11/75	18:55	6.83	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR·MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/09/75	22:30	7.86	0.0	0.0	636.1	0.0	636.1
D	05/09/75	22:29	8.26	0.0	0.0	484.3	0.0	484.3
I	05/10/75	00:09	7.70	0.0	0.0	129.9	0.0	129.9
D	05/10/75	00:09	6.98	0.0	0.0	0.0	0.0	0.0
I	05/10/75	01:38	7.61	0.0	131.4	1839.7	0.0	1971.1
D	05/10/75	01:51	8.53	0.0	0.0	2813.6	0.0	2813.6
I	05/10/75	03:10	7.00	0.0	0.0	1000.0	0.0	1000.0
D	05/10/75	03:15	7.26	0.0	0.0	275.5	0.0	275.5
I	05/10/75	04:40	7.18	0.0	0.0	975.0	0.0	975.0
I	05/10/75	04:30	6.90	0.0	0.0	579.7	0.0	579.7
I	05/10/75	05:40	7.68	0.0	0.0	0.0	0.0	0.0
D	05/10/75	05:42	7.44	0.0	0.0	0.0	0.0	0.0
I	05/10/75	22:10	8.15	0.0	0.0	245.4	0.0	245.4
D	05/10/75	22:00	7.17	0.0	0.0	139.5	0.0	139.5
I	05/10/75	23:20	6.83	0.0	0.0	878.5	0.0	878.5
D	05/10/75	23:25	8.35	0.0	0.0	359.3	0.0	359.3
I	05/11/75	00:35	7.53	0.0	0.0	132.8	0.0	132.8
D	05/11/75	00:35	8.71	0.0	0.0	918.5	0.0	918.5
I	05/11/75	01:55	7.35	0.0	0.0	272.1	0.0	272.1
D	05/11/75	01:51	7.80	0.0	0.0	128.2	0.0	128.2
I	05/11/75	03:10	6.83	0.0	0.0	439.2	0.0	439.2
D	05/11/75	03:14	7.90	0.0	0.0	1772.2	0.0	1772.2
I	05/11/75	04:28	7.88	0.0	0.0	1903.5	0.0	1903.5
D	05/11/75	04:28	8.44	0.0	0.0	710.9	0.0	710.9
I	05/11/75	05:44	7.68	0.0	0.0	130.9	0.0	130.9
D	05/11/75	05:41	7.99	0.0	0.0	125.2	0.0	125.2
I	05/11/75	22:10	6.83	0.0	0.0	0.0	0.0	0.0
D	05/11/75	22:10	7.08	0.0	0.0	141.2	0.0	141.2
I	05/11/75	23:15	7.79	0.0	0.0	128.4	0.0	128.4
D	05/11/75	23:16	8.53	0.0	0.0	234.5	0.0	234.5
I	05/12/75	00:34	6.83	0.0	0.0	146.4	0.0	146.4

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION	(A)	DATE	TIME (HR-MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D		06/12/75	00:27	8.35	0.0	0.0	119.8	0.0	119.8
I		06/12/75	02:03	7.88	0.0	0.0	126.9	0.0	126.9
D		06/12/75	02:00	7.44	0.0	0.0	403.2	0.0	403.2
I		06/12/75	03:25	7.00	0.0	0.0	142.9	0.0	142.9
D		06/12/75	03:25	7.81	0.0	0.0	128.0	0.0	128.0
I		06/12/75	04:39	7.16	0.0	0.0	0.0	0.0	0.0
D		06/12/75	04:37	6.72	0.0	0.0	744.0	0.0	744.0
I		06/12/75	05:50	7.70	0.0	0.0	0.0	0.0	0.0
D		06/12/75	05:40	8.17	0.0	0.0	122.4	0.0	122.4
I		06/12/75	21:18	7.35	0.0	0.0	136.1	0.0	136.1
D		06/12/75	21:15	7.90	0.0	0.0	0.0	253.2	253.2
I		06/12/75	23:14	7.70	0.0	0.0	0.0	0.0	0.0
D		06/12/75	23:05	7.72	0.0	0.0	0.0	0.0	0.0
I		06/13/75	00:10	7.35	0.0	0.0	272.1	0.0	272.1
D		06/13/75	00:05	6.90	0.0	0.0	0.0	0.0	0.0
I		06/13/75	01:05	6.48	0.0	0.0	154.3	0.0	154.3
D		06/13/75	01:13	7.53	0.0	0.0	265.6	0.0	265.6
I		06/13/75	02:39	7.96	0.0	0.0	251.2	0.0	251.2
D		06/13/75	02:36	7.71	0.0	0.0	518.8	0.0	518.8
I		06/13/75	03:55	7.00	0.0	0.0	0.0	0.0	0.0
D		06/13/75	03:49	8.17	0.0	0.0	244.8	0.0	244.8
I		06/13/75	05:03	7.70	0.0	0.0	0.0	0.0	0.0
D		06/13/75	05:07	7.53	0.0	0.0	132.8	0.0	132.8
I		06/16/75	22:18	6.83	0.0	0.0	146.4	0.0	146.4
D		06/16/75	22:10	8.26	0.0	0.0	0.0	0.0	0.0
I		06/16/75	23:25	7.35	0.0	0.0	0.0	0.0	0.0
D		06/16/75	23:15	7.62	0.0	0.0	0.0	0.0	0.0
I		06/17/75	00:25	6.64	0.0	0.0	0.0	0.0	0.0
D		06/17/75	00:15	7.44	0.0	0.0	0.0	0.0	0.0
I		06/17/75	01:15	7.35	0.0	0.0	0.0	0.0	0.0
D		06/17/75	01:20	7.44	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR·MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/17/75	02:10	8.05	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:19	7.26	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:17	8.05	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:25	8.35	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:17	6.65	0.0	0.0	0.0	0.0	0.0
D	06/17/75	04:10	8.62	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:58	6.83	0.0	0.0	0.0	0.0	0.0
D	06/17/75	05:00	7.62	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:05	7.35	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:04	7.44	0.0	0.0	0.0	0.0	0.0
I	06/17/75	23:28	7.53	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:10	6.72	0.0	0.0	148.8	0.0	148.8
I	06/18/75	00:48	6.65	0.0	0.0	0.0	0.0	0.0
D	06/18/75	99:16	6.88	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:35	8.05	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:44	6.90	0.0	0.0	144.9	0.0	144.9
I	06/18/75	02:44	7.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	02:40	6.72	0.0	0.0	0.0	0.0	0.0
I	06/18/75	03:50	8.05	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:43	8.53	0.0	0.0	117.2	0.0	117.2
I	06/18/75	04:45	7.53	0.0	0.0	0.0	0.0	0.0
D	06/18/75	04:40	7.99	0.0	0.0	0.0	0.0	0.0
I	06/18/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	06/18/75	05:27	8.35	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:04	7.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:58	7.26	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:55	7.18	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:53	7.99	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:41	7.35	0.0	0.0	0.0	136.1	136.1
D	06/18/75	23:50	6.90	0.0	0.0	0.0	0.0	0.0
I	06/19/75	00:39	7.53	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR.MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	05/19/75	00:33	6.72	0.0	0.0	0.0	0.0	0.0
I	05/19/75	01:21	7.68	0.0	0.0	126.9	0.0	126.9
D	05/19/75	01:25	6.90	0.0	0.0	0.0	0.0	0.0
I	05/19/75	02:21	7.00	0.0	0.0	0.0	0.0	0.0
D	05/19/75	02:12	6.72	0.0	0.0	148.8	0.0	148.8
I	05/19/75	03:21	7.53	0.0	0.0	0.0	0.0	0.0
D	05/19/75	03:20	8.17	0.0	0.0	0.0	0.0	0.0
I	05/19/75	04:18	7.35	0.0	0.0	0.0	0.0	0.0
D	05/19/75	04:27	7.44	0.0	0.0	0.0	0.0	0.0
I	05/19/75	05:50	7.88	0.0	0.0	0.0	0.0	0.0
D	05/19/75	05:23	7.53	0.0	0.0	0.0	0.0	0.0
I	05/19/75	21:57	7.53	0.0	0.0	0.0	0.0	0.0
D	05/19/75	22:23	8.62	0.0	0.0	0.0	0.0	0.0
I	05/19/75	23:07	7.88	0.0	0.0	0.0	0.0	0.0
D	05/19/75	23:16	7.99	0.0	0.0	0.0	0.0	0.0
I	05/20/75	00:00	7.53	0.0	0.0	0.0	0.0	0.0
D	05/20/75	00:00	6.90	0.0	0.0	0.0	144.9	144.9
I	05/20/75	00:50	7.09	0.0	0.0	0.0	0.0	0.0
D	05/20/75	00:46	8.35	0.0	0.0	0.0	0.0	0.0
I	05/20/75	01:43	7.35	0.0	0.0	0.0	0.0	0.0
D	05/20/75	01:31	6.90	0.0	0.0	0.0	0.0	0.0
I	05/20/75	02:21	7.70	0.0	0.0	0.0	259.7	259.7
D	05/20/75	02:20	8.08	0.0	0.0	0.0	123.8	123.8
I	05/23/75	22:28	6.83	0.0	0.0	146.4	0.0	146.4
D	05/23/75	22:45	7.26	0.0	0.0	0.0	0.0	0.0
I	05/23/75	23:45	7.18	0.0	0.0	0.0	0.0	0.0
D	05/23/75	23:31	8.18	0.0	0.0	0.0	0.0	0.0
I	05/24/75	00:35	7.70	0.0	0.0	0.0	0.0	0.0
D	05/24/75	00:30	6.81	0.0	0.0	0.0	0.0	0.0
I	05/24/75	01:25	7.70	0.0	0.0	129.9	0.0	129.9
D	05/24/75	01:22	7.90	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/24/75	02:17	7.88	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:15	7.44	0.0	0.0	0.0	0.0	0.0
I	06/24/75	03:10	7.53	0.0	0.0	132.8	132.8	265.6
D	06/24/75	03:05	7.26	0.0	0.0	0.0	0.0	0.0
I	06/24/75	03:58	6.83	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:12	8.62	0.0	0.0	0.0	0.0	0.0
I	06/24/75	04:55	7.70	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:55	6.90	0.0	0.0	0.0	0.0	0.0
I	06/24/75	05:50	8.05	0.0	0.0	0.0	0.0	0.0
D	06/24/75	05:50	6.72	0.0	0.0	0.0	0.0	0.0
I	06/24/75	21:34	8.05	0.0	0.0	0.0	0.0	0.0
D	06/24/75	21:37	7.26	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:39	6.83	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:27	6.72	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:19	7.00	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:21	7.17	0.0	0.0	0.0	0.0	0.0
I	06/25/75	00:10	7.88	0.0	0.0	0.0	0.0	0.0
D	06/25/75	00:16	6.65	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:05	6.83	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:10	8.17	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:10	7.70	0.0	0.0	129.9	0.0	129.9
D	06/25/75	02:02	7.80	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:50	7.88	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:55	8.35	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:42	7.88	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:45	7.08	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:33	7.35	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:25	7.17	0.0	0.0	0.0	0.0	0.0
I	06/25/75	05:30	7.79	0.0	0.0	0.0	0.0	0.0
D	06/25/75	05:30	8.62	0.0	0.0	0.0	0.0	0.0
I	06/25/75	22:16	7.18	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

STRIPED BASS DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D		05/25/75	22:00	7.44	0.0	0.0	0.0	0.0	0.0
I		05/25/75	23:10	7.70	0.0	0.0	0.0	0.0	0.0
D		05/25/75	23:32	8.08	0.0	0.0	0.0	0.0	0.0
I		05/26/75	00:23	7.00	0.0	0.0	0.0	0.0	0.0
D		05/26/75	00:20	8.17	0.0	0.0	0.0	0.0	0.0
I		05/26/75	01:35	7.00	0.0	0.0	0.0	0.0	0.0
D		05/27/75	01:36	8.17	0.0	0.0	0.0	0.0	0.0
I		05/26/75	02:43	6.65	0.0	0.0	0.0	0.0	0.0
D		05/26/75	02:50	8.62	0.0	0.0	0.0	0.0	0.0
I		05/26/75	03:50	8.05	0.0	0.0	0.0	0.0	0.0
D		05/26/75	03:50	7.99	0.0	0.0	0.0	0.0	0.0
I		05/26/75	05:03	7.00	0.0	0.0	0.0	0.0	0.0
D		05/26/75	04:45	7.80	0.0	0.0	0.0	0.0	0.0
I		05/26/75	22:06	8.05	0.0	0.0	0.0	0.0	0.0
D		05/26/75	21:42	8.53	0.0	0.0	0.0	0.0	0.0
I		05/26/75	23:11	6.83	0.0	0.0	0.0	0.0	0.0
D		05/26/75	23:16	7.17	0.0	0.0	0.0	0.0	0.0
I		05/27/75	00:20	8.05	0.0	0.0	0.0	0.0	0.0
D		05/27/75	00:19	8.62	0.0	0.0	0.0	0.0	0.0
I		05/27/75	01:33	8.15	0.0	0.0	0.0	0.0	0.0
D		05/27/75	01:31	8.53	0.0	0.0	0.0	0.0	0.0
I		05/27/75	02:25	7.70	0.0	0.0	0.0	0.0	0.0
D		05/27/75	02:36	7.80	0.0	0.0	0.0	0.0	0.0
I		05/27/75	03:34	7.53	0.0	0.0	132.8	0.0	132.8
D		05/27/75	03:37	7.99	0.0	0.0	0.0	0.0	0.0
I		05/27/75	04:39	7.53	0.0	0.0	0.0	0.0	0.0
D		05/27/75	04:40	7.99	0.0	0.0	0.0	0.0	0.0
I		05/27/75	05:40	7.53	0.0	0.0	0.0	0.0	0.0
D		05/27/75	05:35	6.72	0.0	0.0	0.0	0.0	0.0
I		05/30/75	22:12	7.53	0.0	0.0	0.0	0.0	0.0
D		05/30/75	22:10	7.17	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

STRIPED BASS DENSITY

(A) STATION	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/30/75	23:20	7.53	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:25	6.81	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:14	7.53	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:21	8.17	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:27	8.65	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:16	7.26	0.0	0.0	0.0	0.0	0.0
I	07/01/75	02:25	7.70	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:50	6.90	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:14	8.65	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:15	7.44	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:12	8.65	0.0	0.0	0.0	0.0	0.0
D	07/01/75	04:25	7.80	0.0	0.0	0.0	0.0	0.0
I	07/01/75	05:15	8.65	0.0	0.0	0.0	0.0	0.0
D	07/01/75	05:16	8.62	0.0	0.0	116.0	0.0	116.0
I	07/01/75	06:08	7.70	0.0	0.0	0.0	0.0	0.0
D	07/01/75	06:09	7.99	0.0	0.0	0.0	0.0	0.0
I	07/01/75	20:56	7.18	0.0	0.0	0.0	0.0	0.0
D	07/01/75	20:50	8.18	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:50	8.15	0.0	0.0	0.0	0.0	0.0
D	07/01/75	21:55	7.08	0.0	0.0	0.0	0.0	0.0
I	07/01/75	22:50	7.53	0.0	0.0	0.0	0.0	0.0
D	07/01/75	22:50	6.99	0.0	0.0	0.0	0.0	0.0
I	07/01/75	23:44	8.65	0.0	0.0	124.2	0.0	124.2
D	07/01/75	23:40	7.26	0.0	0.0	0.0	0.0	0.0
I	07/02/75	00:38	7.18	0.0	0.0	0.0	0.0	0.0
D	07/02/75	00:32	8.35	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:25	7.53	0.0	0.0	132.8	0.0	132.8
D	07/02/75	01:30	6.48	0.0	0.0	0.0	0.0	0.0
I	07/02/75	02:23	7.18	0.0	0.0	0.0	0.0	0.0
D	07/02/75	02:16	8.17	0.0	0.0	0.0	0.0	0.0
I	07/02/75	03:10	8.65	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	07/02/75	03:10	7.00	0.0	0.0	0.0	0.0	0.0
I	07/02/75	04:03	8.05	0.0	0.0	0.0	0.0	0.0
D	07/02/75	04:00	6.99	0.0	0.0	0.0	0.0	0.0
I	07/02/75	05:16	8.05	0.0	0.0	0.0	0.0	0.0
D	07/02/75	05:05	8.53	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:03	7.88	0.0	0.0	0.0	0.0	0.0
D	07/02/75	06:00	7.99	0.0	0.0	0.0	0.0	0.0
I	07/02/75	06:51	7.70	0.0	0.0	0.0	0.0	0.0
D	07/02/75	07:00	6.81	0.0	0.0	0.0	0.0	0.0
I	07/07/75	20:52	7.53	0.0	0.0	0.0	0.0	0.0
D	07/07/75	20:50	7.62	0.0	0.0	0.0	0.0	0.0
I	07/07/75	09:99	-0.99	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:55	8.62	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:50	7.18	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:10	6.72	0.0	0.0	0.0	297.6	297.6
I	07/07/75	23:45	6.83	0.0	0.0	0.0	0.0	0.0
D	07/08/75	00:03	7.99	0.0	0.0	0.0	0.0	0.0
I	07/08/75	00:56	7.35	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:05	7.08	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:55	7.70	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:00	7.90	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:45	8.05	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:55	7.08	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:55	7.00	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:00	7.62	0.0	0.0	0.0	0.0	0.0
I	07/08/75	04:55	7.68	0.0	0.0	0.0	0.0	0.0
D	07/08/75	04:53	7.26	0.0	0.0	0.0	0.0	0.0
I	07/08/75	05:39	7.53	0.0	0.0	0.0	0.0	0.0
D	07/08/75	05:53	7.90	0.0	0.0	0.0	0.0	0.0
I	07/08/75	06:50	8.05	0.0	0.0	0.0	0.0	0.0
D	07/08/75	06:45	7.26	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

2.3 BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1975

STRIPED BASS DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	I	06/03/75	23:57	0.2	6.56	0.0	305.0	2135.2	0.0	2440.2
	D	06/04/75	00:15	0.2	9.76	0.0	0.0	2253.0	0.0	2253.0
	D	06/04/75	02:09	0.2	7.11	0.0	0.0	1967.9	0.0	1967.9
	I	06/04/75	02:27	0.1	7.81	0.0	0.0	2944.1	0.0	2944.1
	D	06/04/75	04:00	-0.5	6.56	0.0	0.0	1677.7	0.0	1677.7
	I	06/04/75	04:20	-0.5	7.95	0.0	0.0	1257.6	0.0	1257.6
	D	06/04/75	21:36	0.4	7.67	0.0	0.0	1564.0	0.0	1564.0
	I	06/04/75	21:40	0.4	6.84	0.0	0.0	585.2	0.0	585.2
	I	06/04/75	22:55	0.3	6.84	0.0	0.0	1755.6	0.0	1755.6
	D	06/04/75	22:57	0.3	7.39	0.0	0.0	947.0	0.0	947.0
	I	06/05/75	00:19	0.1	7.39	0.0	0.0	2028.8	0.0	2028.8
	D	06/05/75	00:33	0.1	7.67	0.0	130.3	1824.7	130.3	2085.3
	I	06/05/75	01:38	0.1	7.95	0.0	0.0	2263.8	0.0	2263.8
	D	06/05/75	01:42	0.0	6.56	0.0	0.0	915.1	0.0	915.1
	D	06/05/75	03:00	0.0	7.81	0.0	0.0	1280.0	0.0	1280.0
	I	06/05/75	03:03	0.0	6.56	0.0	0.0	915.1	0.0	915.1
	I	06/05/75	04:10	-0.3	7.53	0.0	0.0	1726.1	0.0	1726.1
	D	06/05/75	04:16	-0.3	6.56	0.0	0.0	1525.1	0.0	1525.1
	D	06/05/75	21:45	1.0	7.11	0.0	0.0	140.6	0.0	140.6
	I	06/05/75	21:53	0.9	6.56	0.0	0.0	1067.5	0.0	1067.5
	D	06/05/75	23:05	0.7	7.67	0.0	0.0	651.6	0.0	651.6
	I	06/05/75	23:09	0.7	6.56	0.0	0.0	152.5	0.0	152.5
	D	06/06/75	00:20	0.4	7.39	0.0	0.0	270.6	0.0	270.6
	I	06/06/75	00:30	0.4	7.25	0.0	0.0	551.5	0.0	551.5
	I	06/06/75	01:37	0.3	7.39	0.0	0.0	405.9	0.0	405.9
	D	06/06/75	01:39	0.3	7.11	0.0	0.0	421.8	0.0	421.8
	D	06/06/75	02:49	0.2	6.97	0.0	0.0	143.4	0.0	143.4
	I	06/06/75	02:51	0.2	7.95	0.0	0.0	2641.2	0.0	2641.2

(A):I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/06/75	03:51	-0.2	6.56	0.0	0.0	457.5	0.0	457.5
D	06/06/75	03:53	-0.2	7.81	0.0	0.0	384.0	0.0	384.0
I	06/06/75	04:46	0.4	7.39	0.0	0.0	541.1	0.0	541.1
D	06/06/75	04:48	0.4	6.97	0.0	0.0	716.9	0.0	716.9
I	06/09/75	21:55	0.9	6.56	0.0	0.0	152.5	0.0	152.5
D	06/09/75	21:57	1.0	7.33	0.0	0.0	0.0	0.0	0.0
I	06/09/75	22:05	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D	06/09/75	23:02	1.1	6.56	0.0	0.0	0.0	0.0	0.0
D	06/10/75	00:00	1.0	7.39	0.0	0.0	405.8	0.0	405.8
I	06/10/75	00:04	0.9	7.39	0.0	0.0	0.0	0.0	0.0
D	06/10/75	00:59	0.8	6.79	0.0	0.0	149.3	0.0	149.3
I	06/10/75	01:00	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/10/75	02:00	0.5	6.70	0.0	0.0	448.0	0.0	448.0
I	06/10/75	02:15	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/10/75	03:09	-9.9	7.81	0.0	0.0	512.0	0.0	512.0
I	06/10/75	03:28	0.5	6.79	0.0	0.0	0.0	0.0	0.0
D	06/10/75	04:24	-9.9	7.81	0.0	0.0	384.0	0.0	384.0
I	06/10/75	04:33	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	06/10/75	22:07	1.1	7.95	0.0	0.0	125.8	0.0	125.8
D	06/10/75	22:10	1.1	6.97	0.0	0.0	143.4	0.0	143.4
D	06/10/75	23:32	1.0	6.97	0.0	0.0	143.4	0.0	143.4
I	06/10/75	23:36	1.0	7.95	0.0	0.0	503.1	0.0	503.1
D	06/11/75	01:08	0.8	7.67	0.0	0.0	130.3	0.0	130.3
I	06/11/75	01:10	0.8	7.25	0.0	0.0	137.9	0.0	137.9
D	06/11/75	02:27	0.5	6.56	0.0	0.0	305.0	0.0	305.0
I	06/11/75	02:27	0.5	6.84	0.0	0.0	146.3	0.0	146.3
D	06/11/75	03:40	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/11/75	03:45	0.1	6.70	0.0	0.0	448.0	0.0	448.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/11/75	21:12	0.3	6.70	0.0	0.0	149.3	0.0	149.3
I	06/11/75	21:25	0.3	7.95	0.0	0.0	628.8	0.0	628.8
D	06/11/75	22:33	0.8	7.67	0.0	0.0	260.7	0.0	260.7
I	06/11/75	22:37	0.8	7.39	0.0	0.0	405.8	0.0	405.8
D	06/11/75	23:35	1.0	7.67	0.0	0.0	130.3	0.0	130.3
I	06/11/75	23:41	1.0	6.56	0.0	0.0	610.0	0.0	610.0
I	06/12/75	00:52	1.0	7.95	0.0	0.0	125.8	0.0	125.8
D	06/12/75	00:53	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/12/75	01:51	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/12/75	01:53	0.8	7.39	0.0	0.0	0.0	0.0	0.0
D	06/12/75	02:53	0.6	7.11	0.0	0.0	0.0	0.0	0.0
I	06/12/75	02:57	0.6	7.53	0.0	0.0	531.1	0.0	531.1
D	06/12/75	03:55	0.3	6.56	0.0	0.0	0.0	0.0	0.0
I	06/12/75	04:03	0.3	6.56	0.0	0.0	152.5	0.0	152.5
I	06/12/75	21:13	0.6	7.81	0.0	0.0	0.0	0.0	0.0
D	06/12/75	21:15	-0.3	7.81	0.0	0.0	384.0	0.0	384.0
D	06/12/75	22:12	0.6	6.97	0.0	0.0	1146.9	0.0	1146.9
I	06/12/75	22:16	0.6	7.81	0.0	0.0	128.0	0.0	128.0
D	06/12/75	23:12	0.9	7.11	0.0	0.0	562.3	0.0	562.3
I	06/12/75	23:14	0.9	7.39	0.0	0.0	405.9	0.0	405.9
D	06/13/75	00:21	1.1	7.39	0.0	0.0	405.8	0.0	405.8
I	06/13/75	00:30	1.1	7.53	0.0	0.0	796.7	0.0	796.7
D	06/13/75	01:31	1.1	6.70	0.0	0.0	149.3	0.0	149.3
I	06/13/75	01:35	1.1	7.25	0.0	0.0	551.5	0.0	551.5
D	06/13/75	02:25	1.1	7.25	0.0	0.0	413.6	0.0	413.6
I	06/13/75	02:27	1.1	7.95	0.0	0.0	125.8	0.0	125.8
I	06/13/75	03:11	1.0	7.39	0.0	0.0	270.6	0.0	270.6
D	06/13/75	03:15	0.9	7.25	0.0	0.0	551.6	0.0	551.6

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	04:00	0.7	6.70	0.0	0.0	298.6	0.0	298.6
I	06/13/75	04:12	0.7	7.95	0.0	0.0	377.3	0.0	377.3
I	06/16/75	21:12	0.2	7.53	0.0	0.0	0.0	0.0	0.0
D	06/16/75	21:13	0.2	6.56	0.0	0.0	0.0	152.5	152.5
D	06/16/75	22:12	0.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:29	0.0	6.70	0.0	0.0	0.0	0.0	0.0
I	06/16/75	23:10	-0.1	7.53	0.0	0.0	0.0	0.0	0.0
D	06/16/75	23:11	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:01	0.1	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	00:06	0.0	7.67	0.0	0.0	130.3	130.3	260.6
I	06/17/75	00:59	0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	06/17/75	01:11	0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	02:13	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:17	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:00	0.6	7.95	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:15	0.6	6.56	0.0	0.0	152.5	0.0	152.5
D	06/17/75	04:00	0.8	7.11	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:01	0.8	7.53	0.0	0.0	132.8	0.0	132.8
I	06/17/75	21:19	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	21:25	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:15	0.2	7.39	0.0	0.0	135.3	0.0	135.3
D	06/17/75	22:25	0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:16	-0.1	7.81	0.0	0.0	128.0	0.0	128.0
I	06/17/75	23:35	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	00:14	-0.2	6.84	0.0	0.0	0.0	146.3	146.3
I	06/18/75	00:18	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:00	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:11	-0.2	6.84	0.0	0.0	292.6	0.0	292.6

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/18/75	01:53	0.0	7.53	0.0	0.0	132.8	0.0	132.8
D	06/18/75	02:02	0.0	7.81	0.0	0.0	128.0	0.0	128.0
I	06/18/75	02:45	0.2	7.25	0.0	0.0	275.8	0.0	275.8
D	06/18/75	02:58	0.2	7.53	0.0	0.0	265.6	0.0	265.6
I	06/18/75	03:45	0.5	7.81	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:45	0.5	7.53	0.0	0.0	531.1	0.0	531.1
D	06/18/75	21:06	0.6	6.70	0.0	0.0	0.0	0.0	0.0
I	06/18/75	21:14	0.6	7.95	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:57	0.4	7.81	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:01	0.4	7.39	0.0	0.0	270.6	0.0	270.6
I	06/18/75	22:36	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:46	0.3	6.56	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:31	0.0	9.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	23:32	0.2	11.16	0.0	0.0	0.0	0.0	0.0
D	06/19/75	00:25	0.0	9.21	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:17	-0.2	8.51	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:21	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	06/19/75	02:06	-0.1	8.51	0.0	117.5	117.5	0.0	235.0
D	06/19/75	02:11	-0.1	8.37	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:02	0.0	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	03:03	-9.9	8.23	0.0	0.0	0.0	0.0	0.0
D	06/19/75	03:48	0.2	8.23	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:49	0.2	9.35	0.0	0.0	0.0	0.0	0.0
I	06/19/75	21:17	0.9	8.93	0.0	0.0	0.0	0.0	0.0
D	06/19/75	21:22	0.8	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:08	0.6	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	22:12	0.6	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:55	0.4	9.35	0.0	0.0	107.0	0.0	107.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	23:03	0.4	8.09	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:26	0.3	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:36	0.3	8.09	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:06	0.2	9.21	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:15	0.2	9.21	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:36	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:58	0.0	8.93	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:37	-0.2	8.93	0.0	0.0	0.0	0.0	0.0
D	06/20/75	01:40	-0.2	8.37	0.0	0.0	119.5	0.0	119.5
I	06/23/75	21:10	0.6	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	21:14	0.6	8.09	0.0	0.0	0.0	0.0	0.0
D	06/23/75	22:06	0.8	7.81	0.0	0.0	128.0	0.0	128.0
I	06/23/75	22:14	0.8	9.35	0.0	0.0	0.0	0.0	0.0
I	06/23/75	22:45	0.8	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:12	0.8	9.35	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:47	0.8	9.76	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:03	0.8	8.65	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:43	0.7	7.53	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:52	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	01:36	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:42	0.5	7.81	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:23	0.3	6.56	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:30	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	03:20	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/24/75	03:25	0.0	6.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	04:05	-0.2	6.84	0.0	0.0	146.3	0.0	146.3
D	06/24/75	04:12	-0.2	6.70	0.0	0.0	0.0	0.0	0.0
I	06/24/75	21:44	0.5	7.95	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/24/75	21:49	0.5	7.53	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:37	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:49	0.8	7.95	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:37	0.8	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:47	0.8	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	00:47	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	00:49	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:32	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:39	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:22	0.5	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:25	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:12	0.2	7.95	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:27	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:10	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:15	-0.2	7.95	0.0	0.0	125.8	0.0	125.8
I	06/26/75	09:00	0.0	7.25	0.0	0.0	0.0	0.0	0.0
D	06/26/75	09:15	0.0	6.84	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:00	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:06	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:45	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:57	0.3	7.25	0.0	0.0	0.0	0.0	0.0
I	06/26/75	12:12	0.8	8.37	0.0	0.0	0.0	0.0	0.0
D	06/26/75	12:26	0.7	23.44	0.0	0.0	0.0	0.0	0.0
I	06/26/75	13:16	0.7	21.06	0.0	0.0	47.5	0.0	47.5
D	06/26/75	13:17	0.8	8.37	0.0	0.0	0.0	0.0	0.0
I	06/26/75	14:15	0.7	8.23	0.0	0.0	0.0	0.0	0.0
D	06/26/75	14:20	0.7	8.09	0.0	0.0	0.0	0.0	0.0
I	06/26/75	15:00	0.5	7.39	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/26/75	15:10	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	15:50	0.3	6.70	0.0	0.0	152.5	0.0	152.5
I	06/27/75	10:16	0.1	7.95	0.0	0.0	0.0	0.0	0.0
D	06/27/75	10:25	0.1	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	11:14	0.3	6.56	0.0	0.0	0.0	0.0	0.0
D	06/27/75	11:20	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/27/75	12:08	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/27/75	12:10	0.5	7.39	0.0	0.0	0.0	0.0	0.0
I	06/27/75	12:50	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	12:58	0.6	7.25	0.0	0.0	0.0	0.0	0.0
I	06/27/75	13:45	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	13:49	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	14:40	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	14:45	0.7	7.53	0.0	0.0	0.0	0.0	0.0
D	06/27/75	15:35	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	15:36	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/27/75	21:05	0.2	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	21:10	0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:01	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/30/75	22:17	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/30/75	22:58	0.1	6.56	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:05	0.1	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	23:49	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:55	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:45	0.4	7.81	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:53	0.4	7.95	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:41	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:43	0.5	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

STRIPED BASS DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	I	07/03/75	11:52	-0.2	7.95	0.0	0.0	0.0	0.0	0.0
	D	07/03/75	11:58	-0.2	6.56	0.0	0.0	0.0	0.0	0.0
	I	07/03/75	12:51	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
	D	07/03/75	12:58	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
	D	07/03/75	13:50	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
	I	07/03/75	13:51	-0.1	6.56	0.0	0.0	0.0	0.0	0.0
	I	07/03/75	14:46	0.2	6.56	0.0	0.0	0.0	0.0	0.0
	D	07/03/75	14:51	0.2	6.56	0.0	0.0	0.0	0.0	0.0
	I	07/03/75	15:45	0.5	7.53	0.0	0.0	0.0	0.0	0.0
	D	07/03/75	15:46	0.5	7.25	0.0	0.0	0.0	0.0	0.0
	I	07/07/75	21:05	1.1	7.25	0.0	0.0	0.0	137.9	137.9
	D	07/07/75	21:05	1.1	6.70	0.0	0.0	0.0	0.0	0.0
	I	07/07/75	22:11	1.1	7.81	0.0	0.0	0.0	0.0	0.0
	D	07/07/75	22:23	1.1	7.39	0.0	0.0	0.0	0.0	0.0
	I	07/07/75	23:38	0.8	7.53	0.0	0.0	0.0	0.0	0.0
	D	07/07/75	23:39	0.8	7.39	0.0	0.0	0.0	0.0	0.0
	I	07/08/75	01:00	0.5	7.81	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	01:05	0.5	6.70	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	02:05	0.2	6.56	0.0	0.0	0.0	0.0	0.0
	I	07/08/75	02:11	0.2	6.56	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	02:54	0.1	6.70	0.0	0.0	0.0	0.0	0.0
	I	07/08/75	02:56	0.1	7.53	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	03:54	-0.1	6.70	0.0	0.0	0.0	0.0	0.0
	I	07/08/75	03:56	-0.1	6.70	0.0	0.0	0.0	0.0	0.0
	I	07/03/75	21:25	1.0	6.70	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	21:31	1.0	6.56	0.0	0.0	0.0	0.0	0.0
	I	07/08/75	22:25	1.0	6.56	0.0	0.0	0.0	0.0	0.0
	D	07/08/75	22:37	1.1	7.25	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/03/75	23:57	0.2	6.56	0.0	0.0	2897.9	0.0	2897.9
D	06/04/75	00:15	0.2	9.76	0.0	0.0	307.2	0.0	307.2
D	06/04/75	02:09	0.2	7.11	0.0	0.0	1265.1	0.0	1265.1
I	06/04/75	02:27	0.1	7.81	0.0	0.0	1280.1	0.0	1280.1
D	06/04/75	04:00	-0.5	6.56	0.0	0.0	915.1	0.0	915.1
I	06/04/75	04:20	-0.5	7.95	0.0	0.0	503.1	0.0	503.1
D	06/04/75	21:36	0.4	7.67	0.0	0.0	781.9	0.0	781.9
I	06/04/75	21:40	0.4	6.84	0.0	0.0	877.8	0.0	877.8
I	06/04/75	22:55	0.3	6.84	0.0	0.0	877.8	0.0	877.8
D	06/04/75	22:57	0.3	7.39	0.0	0.0	135.3	0.0	135.3
I	06/05/75	00:19	0.1	7.39	0.0	0.0	1487.9	0.0	1487.9
D	06/05/75	00:33	0.1	7.67	0.0	0.0	781.9	0.0	781.9
I	06/05/75	01:38	0.1	7.95	2263.7	0.0	1006.2	0.0	1006.2
D	06/05/75	01:42	0.0	6.56	0.0	0.0	457.5	0.0	457.5
D	06/05/75	03:00	0.0	7.81	0.0	0.0	1024.0	0.0	1024.0
I	06/05/75	03:03	0.0	6.56	1830.3	0.0	457.5	0.0	457.5
I	06/05/75	04:10	-0.3	7.53	3186.0	0.0	265.5	0.0	265.5
D	06/05/75	04:16	-0.3	6.56	0.0	0.0	305.0	0.0	305.0
D	06/05/75	21:45	1.0	7.11	0.0	0.0	562.2	0.0	562.2
I	06/05/75	21:53	0.9	6.56	4118.1	0.0	0.0	0.0	0.0
D	06/05/75	23:05	0.7	7.67	0.0	0.0	651.6	0.0	651.6
I	06/05/75	23:09	0.7	6.56	5033.2	0.0	1372.7	0.0	1372.7
D	06/06/75	00:20	0.4	7.39	0.0	0.0	676.3	0.0	676.3
I	06/06/75	00:30	0.4	7.25	0.0	0.0	0.0	0.0	0.0
I	06/06/75	01:37	0.3	7.39	0.0	0.0	135.3	0.0	135.3
D	06/06/75	01:39	0.3	7.11	0.0	0.0	702.8	0.0	702.8
D	06/06/75	02:49	0.2	6.97	0.0	0.0	844.0	0.0	844.0
I	06/06/75	02:51	0.2	7.95	503.1	0.0	125.8	0.0	125.8

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/06/75	03:51	-0.2	6.56	0.0	0.0	152.5	0.0	152.5
D	06/06/75	03:53	-0.2	7.81	0.0	0.0	384.0	0.0	384.0
I	06/06/75	04:46	0.4	7.39	0.0	0.0	0.0	0.0	0.0
D	06/06/75	04:48	0.4	6.97	0.0	0.0	143.4	0.0	143.4
I	06/09/75	21:55	0.9	6.56	0.0	0.0	0.0	0.0	0.0
D	06/09/75	21:57	1.0	7.39	0.0	0.0	405.8	0.0	405.8
I	06/09/75	22:05	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D	06/09/75	23:02	1.1	6.56	0.0	0.0	152.5	0.0	152.5
D	06/10/75	00:00	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/10/75	00:04	0.9	7.39	0.0	0.0	135.3	0.0	135.3
D	06/10/75	00:59	0.8	6.70	0.0	0.0	298.7	0.0	298.7
I	06/10/75	01:00	0.8	7.55	0.0	0.0	0.0	0.0	0.0
D	06/10/75	02:00	0.5	6.70	0.0	0.0	298.6	0.0	298.6
I	06/10/75	02:15	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/10/75	03:09	-9.9	7.81	0.0	0.0	128.0	0.0	128.0
I	06/10/75	03:28	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/10/75	04:24	-9.9	7.81	0.0	0.0	128.0	0.0	128.0
I	06/10/75	04:33	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	06/10/75	22:07	1.1	7.95	0.0	0.0	125.8	0.0	125.8
D	06/10/75	22:10	1.1	6.97	0.0	0.0	573.5	0.0	573.5
D	06/10/75	23:32	1.0	6.97	0.0	0.0	430.1	0.0	430.1
I	06/10/75	23:36	1.0	7.95	0.0	0.0	0.0	0.0	0.0
D	06/11/75	01:08	0.8	7.67	0.0	0.0	130.3	0.0	130.3
I	06/11/75	01:10	0.8	7.25	0.0	0.0	137.9	0.0	137.9
D	06/11/75	02:27	0.5	6.56	0.0	0.0	305.0	0.0	305.0
I	06/11/75	02:27	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/11/75	03:40	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/11/75	03:45	0.1	6.70	0.0	0.0	447.9	0.0	447.9

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/11/75	21:12	0.3	6.70	0.0	0.0	597.4	0.0	597.4
I	06/11/75	21:25	0.3	7.95	0.0	0.0	125.8	0.0	125.8
D	06/11/75	22:33	0.8	7.67	0.0	0.0	521.3	0.0	521.3
I	06/11/75	22:37	0.8	7.39	0.0	0.0	405.9	0.0	405.9
D	06/11/75	23:35	1.0	7.67	0.0	0.0	521.3	260.7	782.0
I	06/11/75	23:41	1.0	6.56	0.0	0.0	457.5	0.0	457.5
I	06/12/75	00:52	1.0	7.95	0.0	0.0	377.3	0.0	377.3
D	06/12/75	00:53	1.0	7.39	0.0	0.0	676.3	0.0	676.3
I	06/12/75	01:51	0.8	7.95	0.0	0.0	377.4	0.0	377.4
D	06/12/75	01:53	0.8	7.39	0.0	0.0	1082.1	0.0	1082.1
D	06/12/75	02:53	0.6	7.11	0.0	0.0	562.2	0.0	562.2
I	06/12/75	02:57	0.6	7.53	0.0	0.0	531.1	0.0	531.1
D	06/12/75	03:55	0.3	6.56	0.0	0.0	762.5	0.0	762.5
I	06/12/75	04:03	0.3	6.56	0.0	0.0	0.0	0.0	0.0
I	06/12/75	21:13	0.6	7.81	0.0	0.0	896.0	0.0	896.0
D	06/12/75	21:15	-9.9	7.81	0.0	0.0	512.0	0.0	512.0
D	06/12/75	22:12	0.6	6.97	0.0	0.0	573.5	0.0	573.5
I	06/12/75	22:16	0.6	7.81	0.0	0.0	896.0	0.0	896.0
D	06/12/75	23:12	0.9	7.11	0.0	0.0	140.6	0.0	140.6
I	06/12/75	23:14	0.9	7.39	0.0	0.0	811.6	0.0	811.6
D	06/13/75	00:21	1.1	7.39	0.0	0.0	811.6	0.0	811.6
I	06/13/75	00:30	1.1	7.53	0.0	132.8	398.3	0.0	531.1
D	06/13/75	01:31	1.1	6.70	0.0	0.0	597.3	0.0	597.3
I	06/13/75	01:35	1.1	7.25	0.0	0.0	137.9	0.0	137.9
D	06/13/75	02:25	1.1	7.25	0.0	0.0	137.9	0.0	137.9
I	06/13/75	02:27	1.1	7.95	0.0	0.0	0.0	0.0	0.0
I	06/13/75	03:11	1.0	7.39	0.0	0.0	1352.6	0.0	1352.6
D	06/13/75	03:15	0.9	7.25	0.0	0.0	689.4	0.0	689.4

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	04:00	0.7	6.70	0.0	0.0	149.3	0.0	149.3
I	06/13/75	04:12	0.7	7.95	0.0	0.0	377.3	0.0	377.3
I	06/16/75	21:12	0.2	7.53	0.0	0.0	265.6	0.0	265.6
D	06/16/75	21:13	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:12	0.0	7.39	0.0	0.0	811.6	0.0	811.6
I	06/16/75	22:29	0.0	6.70	0.0	0.0	448.0	0.0	448.0
I	06/16/75	23:10	-0.1	7.53	0.0	0.0	663.8	0.0	663.8
D	06/16/75	23:11	-0.1	7.81	0.0	0.0	1664.0	0.0	1664.0
I	06/17/75	00:01	0.1	6.70	0.0	0.0	149.3	0.0	149.3
D	06/17/75	00:06	0.0	7.67	0.0	0.0	4561.7	130.3	4692.0
I	06/17/75	00:59	0.2	6.84	0.0	0.0	292.6	0.0	292.6
D	06/17/75	01:11	0.2	7.81	0.0	0.0	2304.1	384.0	2688.1
I	06/17/75	02:13	0.5	7.95	0.0	0.0	377.3	0.0	377.3
D	06/17/75	02:17	0.5	6.70	0.0	0.0	896.0	0.0	896.0
I	06/17/75	03:08	0.6	7.95	0.0	0.0	754.6	0.0	754.6
D	06/17/75	03:15	0.6	6.56	0.0	0.0	457.5	0.0	457.5
D	06/17/75	04:00	0.8	7.11	0.0	0.0	281.2	0.0	281.2
I	06/17/75	04:01	0.8	7.53	0.0	0.0	398.3	0.0	398.3
I	06/17/75	21:19	0.5	6.70	0.0	0.0	149.3	0.0	149.3
D	06/17/75	21:25	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:15	0.2	7.39	0.0	0.0	676.3	0.0	676.3
D	06/17/75	22:25	0.2	6.70	0.0	0.0	298.6	0.0	298.6
D	06/17/75	23:16	-0.1	7.81	0.0	0.0	256.0	0.0	256.0
I	06/17/75	23:35	-0.1	6.84	0.0	0.0	877.8	0.0	877.8
D	06/18/75	00:14	-0.2	6.84	0.0	0.0	438.9	0.0	438.9
I	06/18/75	00:18	-0.2	7.53	0.0	0.0	663.8	0.0	663.8
I	06/18/75	01:00	-0.2	7.53	0.0	0.0	265.6	0.0	265.6
D	06/18/75	01:11	-0.2	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/18/75	01:53	0.0	7.53	0.0	0.0	265.5	0.0	265.5
D	06/18/75	02:02	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/18/75	02:45	0.2	7.25	0.0	0.0	275.8	0.0	275.8
D	06/18/75	02:58	0.2	7.53	0.0	0.0	132.8	0.0	132.8
I	06/18/75	03:45	0.5	7.81	0.0	0.0	0.0	0.0	0.0
D	06/18/75	03:45	0.5	7.53	0.0	0.0	663.8	0.0	663.8
D	06/18/75	21:06	0.6	6.70	0.0	0.0	149.3	0.0	149.3
I	06/18/75	21:14	0.6	7.95	0.0	0.0	125.8	0.0	125.8
D	06/18/75	21:57	0.4	7.81	0.0	0.0	128.0	0.0	128.0
I	06/18/75	22:01	0.4	7.39	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:36	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:46	0.3	6.56	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:31	0.0	9.35	0.0	0.0	286.2	0.0	286.2
D	06/18/75	23:32	0.2	11.16	0.0	0.0	0.0	0.0	0.0
D	06/19/75	00:25	0.0	9.21	0.0	0.0	217.2	0.0	217.2
I	06/19/75	01:17	-0.2	8.51	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:21	-0.2	7.81	0.0	0.0	128.0	0.0	128.0
I	06/19/75	02:06	-0.1	8.51	0.0	0.0	940.1	0.0	940.1
D	06/19/75	02:11	-0.1	8.37	0.0	0.0	239.0	0.0	239.0
I	06/19/75	03:02	0.0	9.35	0.0	0.0	214.0	0.0	214.0
D	06/19/75	03:03	-9.9	8.23	0.0	0.0	121.5	0.0	121.5
D	06/19/75	03:48	0.2	8.23	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:49	0.2	9.35	0.0	0.0	107.0	0.0	107.0
I	06/19/75	21:17	0.8	8.93	0.0	0.0	112.0	0.0	112.0
D	06/19/75	21:22	0.8	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:08	0.6	9.35	0.0	0.0	214.0	0.0	214.0
D	06/19/75	22:12	0.6	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:55	0.4	9.35	0.0	0.0	428.0	0.0	428.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	23:03	0.4	8.09	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:26	0.3	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	23:36	0.3	8.09	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:06	0.2	9.21	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:15	0.2	9.21	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:56	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:58	0.0	8.93	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:37	-0.2	8.93	0.0	0.0	112.0	0.0	112.0
D	06/20/75	01:40	-0.2	8.37	0.0	0.0	0.0	0.0	0.0
I	06/23/75	21:10	0.6	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	21:14	0.6	8.09	0.0	0.0	123.6	0.0	123.6
D	06/23/75	22:06	0.3	7.81	0.0	0.0	0.0	0.0	0.0
I	06/23/75	22:14	0.3	9.35	0.0	0.0	107.0	0.0	107.0
I	06/23/75	22:45	0.3	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:12	0.3	9.35	0.0	0.0	214.0	0.0	214.0
I	06/23/75	23:47	0.3	9.76	0.0	0.0	102.4	0.0	102.4
D	06/24/75	00:03	0.8	8.65	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:43	0.7	7.53	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:52	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	01:36	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:42	0.5	7.81	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:23	0.3	6.56	0.0	0.0	0.0	0.0	0.0
D	06/24/75	02:30	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	03:20	0.0	7.81	0.0	0.0	128.0	0.0	128.0
I	06/24/75	03:25	0.0	6.56	0.0	0.0	305.0	0.0	305.0
I	06/24/75	04:05	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:12	-0.2	6.70	0.0	0.0	149.3	0.0	149.3
I	06/24/75	21:44	0.5	7.95	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/24/75	21:49	0.5	7.53	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:37	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:49	0.8	7.55	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:37	0.8	6.84	0.0	0.0	292.6	0.0	292.6
D	06/24/75	23:47	0.8	7.39	0.0	0.0	270.5	0.0	270.5
D	06/25/75	00:47	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	00:49	0.8	6.84	0.0	0.0	146.3	0.0	146.3
I	06/25/75	01:32	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:39	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:22	0.5	7.39	0.0	0.0	135.3	0.0	135.3
D	06/25/75	02:25	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:12	0.2	7.95	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:27	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:10	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:15	-0.2	7.95	0.0	0.0	125.8	0.0	125.8
I	06/26/75	09:00	0.0	7.25	0.0	0.0	0.0	0.0	0.0
D	06/26/75	09:15	0.0	6.84	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:00	0.3	6.84	0.0	0.0	146.3	0.0	146.3
D	06/26/75	10:06	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:45	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:57	0.3	7.25	0.0	0.0	0.0	0.0	0.0
I	06/26/75	12:12	0.8	8.37	0.0	0.0	0.0	0.0	0.0
D	06/26/75	12:26	0.7	23.44	0.0	0.0	0.0	0.0	0.0
I	06/26/75	13:16	0.7	21.06	0.0	0.0	47.5	0.0	47.5
D	06/26/75	13:17	0.8	8.37	0.0	0.0	0.0	0.0	0.0
I	06/26/75	14:15	0.7	8.23	0.0	0.0	486.9	0.0	486.9
D	06/26/75	14:20	0.7	8.09	0.0	0.0	0.0	0.0	0.0
I	06/26/75	15:00	0.5	7.39	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/26/75	15:10	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	15:50	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/27/75	10:16	0.1	7.95	0.0	0.0	0.0	0.0	0.0
D	06/27/75	10:25	0.1	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	11:14	0.3	6.56	0.0	0.0	0.0	0.0	0.0
D	06/27/75	11:20	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/27/75	12:08	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/27/75	12:10	0.5	7.39	0.0	0.0	0.0	0.0	0.0
I	06/27/75	12:50	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	12:58	0.6	7.25	0.0	0.0	0.0	0.0	0.0
I	06/27/75	13:45	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	13:49	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	14:40	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/27/75	14:45	0.7	7.53	0.0	0.0	265.5	0.0	265.5
D	06/27/75	15:35	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/27/75	15:36	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/27/75	21:05	0.2	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	21:10	0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	06/30/75	22:01	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/30/75	22:17	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/30/75	22:58	0.1	6.56	0.0	0.0	152.5	0.0	152.5
D	06/30/75	23:05	0.1	6.84	0.0	0.0	0.0	0.0	0.0
I	06/30/75	23:49	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/30/75	23:55	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	07/01/75	00:45	0.4	7.81	0.0	0.0	0.0	0.0	0.0
D	07/01/75	00:53	0.4	7.95	0.0	0.0	0.0	0.0	0.0
I	07/01/75	01:41	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	07/01/75	01:43	0.5	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/01/75	02:25	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D	07/01/75	02:33	0.6	7.25	0.0	0.0	0.0	0.0	0.0
I	07/01/75	03:15	0.7	7.39	0.0	0.0	0.0	0.0	0.0
D	07/01/75	03:22	0.8	7.39	0.0	0.0	0.0	0.0	0.0
I	07/01/75	04:09	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	07/01/75	04:09	0.8	7.39	0.0	0.0	0.0	0.0	0.0
I	07/01/75	21:20	0.5	7.81	0.0	0.0	0.0	0.0	0.0
D	07/01/75	21:32	0.5	7.25	0.0	0.0	0.0	0.0	0.0
D	07/01/75	22:20	0.1	6.84	0.0	0.0	0.0	0.0	0.0
I	07/01/75	22:36	0.9	7.95	0.0	0.0	377.3	0.0	377.3
I	07/01/75	23:15	0.9	6.84	0.0	0.0	146.3	0.0	146.3
D	07/01/75	23:16	0.1	6.56	0.0	0.0	0.0	0.0	0.0
I	07/02/75	00:11	0.2	7.39	0.0	0.0	0.0	0.0	0.0
D	07/02/75	00:11	0.2	7.95	0.0	0.0	0.0	0.0	0.0
I	07/02/75	01:06	0.3	7.25	0.0	0.0	0.0	0.0	0.0
D	07/02/75	01:08	0.3	7.39	0.0	0.0	0.0	0.0	0.0
D	07/02/75	02:09	0.5	7.39	0.0	0.0	0.0	0.0	0.0
I	07/02/75	02:14	0.5	7.95	0.0	0.0	0.0	0.0	0.0
I	07/02/75	03:11	0.6	7.95	0.0	0.0	0.0	0.0	0.0
D	07/02/75	03:12	0.6	7.81	0.0	0.0	0.0	0.0	0.0
I	07/02/75	04:11	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	07/02/75	04:11	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	07/03/75	09:13	0.2	6.70	0.0	0.0	0.0	0.0	0.0
I	07/03/75	09:16	0.2	6.84	0.0	0.0	0.0	0.0	0.0
I	07/03/75	10:03	0.0	6.56	0.0	0.0	0.0	0.0	0.0
D	07/03/75	10:09	0.0	7.95	0.0	0.0	0.0	0.0	0.0
I	07/03/75	11:01	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
D	07/03/75	11:02	-0.2	6.56	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/03/75	11:52	-0.2	7.95	0.0	0.0	0.0	0.0	0.0
D	07/03/75	11:58	-0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	07/03/75	12:51	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	07/03/75	12:58	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
D	07/03/75	13:50	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	07/03/75	13:51	-0.1	6.56	0.0	0.0	0.0	0.0	0.0
I	07/03/75	14:46	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	07/03/75	14:51	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	07/03/75	15:45	0.5	7.53	0.0	0.0	0.0	0.0	0.0
D	07/03/75	15:46	0.5	7.25	0.0	0.0	0.0	0.0	0.0
I	07/07/75	21:05	1.1	7.25	0.0	0.0	0.0	0.0	0.0
D	07/07/75	21:05	1.1	6.70	0.0	0.0	0.0	0.0	0.0
I	07/07/75	22:11	1.1	7.81	0.0	0.0	128.0	0.0	128.0
D	07/07/75	22:23	1.1	7.39	0.0	0.0	0.0	0.0	0.0
I	07/07/75	23:38	0.8	7.53	0.0	0.0	0.0	0.0	0.0
D	07/07/75	23:39	0.8	7.39	0.0	0.0	0.0	0.0	0.0
I	07/08/75	01:00	0.5	7.81	0.0	0.0	0.0	0.0	0.0
D	07/08/75	01:05	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:05	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:11	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	07/08/75	02:54	0.1	6.70	0.0	0.0	0.0	0.0	0.0
I	07/08/75	02:56	0.1	7.53	0.0	0.0	0.0	0.0	0.0
D	07/08/75	03:54	-0.1	6.70	0.0	0.0	0.0	0.0	0.0
I	07/08/75	03:56	-0.1	6.70	0.0	0.0	0.0	0.0	0.0
I	07/08/75	21:25	1.0	6.70	0.0	0.0	0.0	0.0	0.0
D	07/08/75	21:31	1.0	6.56	0.0	0.0	0.0	0.0	0.0
I	07/08/75	22:25	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D	07/08/75	22:37	1.1	7.25	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

WHITE PERCH DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/11/75	13:19	0.9	7.95	0.0	0.0	0.0	0.0	0.0
D	07/11/75	13:30	0.9	6.56	0.0	0.0	0.0	0.0	0.0
D	07/11/75	14:49	0.7	7.95	0.0	0.0	0.0	0.0	0.0
I	07/11/75	14:54	0.7	6.84	0.0	0.0	0.0	0.0	0.0
D	07/11/75	16:09	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	07/11/75	16:10	0.3	7.53	0.0	0.0	0.0	0.0	0.0
I	07/14/75	09:43	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
D	07/14/75	10:01	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	07/14/75	11:17	-0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	07/14/75	11:18	-0.2	7.39	0.0	0.0	0.0	0.0	0.0
D	07/14/75	14:50	0.9	7.95	0.0	0.0	0.0	0.0	0.0
I	07/14/75	14:52	0.9	7.53	0.0	0.0	0.0	0.0	0.0
I	07/14/75	16:15	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	07/14/75	16:20	0.8	7.53	0.0	0.0	0.0	0.0	0.0
I	07/17/75	13:06	-0.3	7.95	0.0	0.0	125.8	0.0	125.8
D	07/17/75	13:16	-0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	07/17/75	14:03	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
D	07/17/75	14:05	-0.1	7.67	0.0	0.0	0.0	0.0	0.0
I	07/17/75	14:45	0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	07/17/75	15:04	0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	07/17/75	15:48	0.2	7.81	0.0	0.0	0.0	0.0	0.0
D	07/17/75	15:54	0.2	7.39	0.0	0.0	0.0	0.0	0.0
I	07/22/75	10:14	0.8	6.84	0.0	0.0	0.0	0.0	0.0
D	07/22/75	10:15	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	07/22/75	11:13	0.9	7.25	0.0	0.0	0.0	0.0	0.0
D	07/22/75	11:17	0.9	7.11	0.0	0.0	0.0	0.0	0.0
I	07/22/75	12:08	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D	07/22/75	12:15	0.6	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I		06/03/75	23:57	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D		06/04/75	00:15	0.2	9.76	0.0	0.0	0.0	0.0	0.0
D		06/04/75	02:09	0.2	7.11	0.0	0.0	0.0	0.0	0.0
I		06/04/75	02:27	0.1	7.81	0.0	0.0	0.0	0.0	0.0
D		06/04/75	04:00	-0.5	6.56	0.0	0.0	0.0	0.0	0.0
I		06/04/75	04:20	-0.5	7.95	0.0	0.0	0.0	0.0	0.0
D		06/04/75	21:36	0.4	7.67	0.0	0.0	0.0	0.0	0.0
I		06/04/75	21:40	0.4	6.84	0.0	0.0	0.0	0.0	0.0
I		06/04/75	22:55	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D		06/04/75	22:57	0.3	7.39	0.0	0.0	0.0	0.0	0.0
I		06/05/75	00:19	0.1	7.39	0.0	0.0	0.0	0.0	0.0
D		06/05/75	00:33	0.1	7.67	0.0	0.0	0.0	0.0	0.0
I		06/05/75	01:38	0.1	7.95	0.0	0.0	0.0	0.0	0.0
D		06/05/75	01:42	0.0	6.56	0.0	0.0	0.0	0.0	0.0
D		06/05/75	03:00	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I		06/05/75	03:03	0.0	6.56	0.0	0.0	0.0	0.0	0.0
I		06/05/75	04:10	-0.3	7.53	0.0	0.0	0.0	0.0	0.0
D		06/05/75	04:16	-0.3	6.56	0.0	0.0	0.0	0.0	0.0
D		06/05/75	21:45	1.0	7.11	0.0	0.0	0.0	0.0	0.0
I		06/05/75	21:53	0.9	6.56	0.0	0.0	152.5	0.0	152.5
D		06/05/75	23:05	0.7	7.67	0.0	0.0	0.0	0.0	0.0
I		06/05/75	23:09	0.7	6.56	0.0	0.0	0.0	0.0	0.0
D		06/06/75	00:20	0.4	7.39	0.0	0.0	0.0	0.0	0.0
I		06/06/75	00:30	0.4	7.25	0.0	0.0	0.0	0.0	0.0
I		06/06/75	01:37	0.3	7.39	0.0	0.0	0.0	0.0	0.0
D		06/06/75	01:39	0.3	7.11	0.0	0.0	0.0	0.0	0.0
D		06/06/75	02:49	0.2	6.97	0.0	0.0	0.0	0.0	0.0
I		06/06/75	02:51	0.2	7.95	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I		06/06/75	03:51	-0.2	6.56	0.0	0.0	0.0	0.0	0.0
D		06/06/75	03:53	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
I		06/06/75	04:46	0.4	7.39	0.0	0.0	0.0	0.0	0.0
D		06/06/75	04:48	0.4	6.97	0.0	0.0	0.0	0.0	0.0
I		06/09/75	21:55	0.9	6.56	0.0	0.0	610.1	0.0	610.1
D		06/09/75	21:57	1.0	7.39	0.0	0.0	135.3	0.0	135.3
I		06/09/75	22:05	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D		06/09/75	23:02	1.1	6.56	0.0	0.0	152.5	0.0	152.5
D		06/10/75	00:00	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I		06/10/75	00:04	0.9	7.39	0.0	0.0	405.8	0.0	405.8
D		06/10/75	00:59	0.8	6.70	0.0	0.0	149.3	0.0	149.3
I		06/10/75	01:00	0.8	7.95	0.0	0.0	1886.5	0.0	1886.5
D		06/10/75	02:00	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I		06/10/75	02:15	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D		06/10/75	03:09	-9.9	7.81	0.0	0.0	0.0	0.0	0.0
I		06/10/75	03:28	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D		06/10/75	04:24	-9.9	7.81	0.0	0.0	0.0	0.0	0.0
I		06/10/75	04:33	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I		06/10/75	22:07	1.1	7.95	0.0	0.0	125.8	0.0	125.8
D		06/10/75	22:10	1.1	6.97	0.0	0.0	0.0	0.0	0.0
D		06/10/75	23:32	1.0	6.97	0.0	0.0	0.0	0.0	0.0
I		06/10/75	23:36	1.0	7.95	0.0	0.0	503.1	0.0	503.1
D		06/11/75	01:08	0.8	7.67	0.0	0.0	0.0	0.0	0.0
I		06/11/75	01:10	0.8	7.25	0.0	0.0	413.6	0.0	413.6
D		06/11/75	02:27	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I		06/11/75	02:27	0.5	6.84	0.0	0.0	1170.4	0.0	1170.4
D		06/11/75	03:40	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I		06/11/75	03:45	0.1	6.70	0.0	0.0	3883.0	0.0	3883.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/11/75	21:12	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/11/75	21:25	0.3	7.95	0.0	0.0	0.0	0.0	0.0
D	06/11/75	22:33	0.8	7.67	0.0	0.0	0.0	0.0	0.0
I	06/11/75	22:37	0.8	7.39	0.0	0.0	946.8	0.0	946.8
D	06/11/75	23:35	1.0	7.67	0.0	0.0	391.0	0.0	391.0
I	06/11/75	23:41	1.0	6.56	0.0	0.0	3813.0	0.0	3813.0
I	06/12/75	00:52	1.0	7.95	0.0	0.0	1383.4	0.0	1383.4
D	06/12/75	00:53	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/12/75	01:51	0.8	7.95	0.0	0.0	1509.2	0.0	1509.2
D	06/12/75	01:53	0.8	7.39	0.0	135.3	270.5	0.0	405.8
D	06/12/75	02:53	0.6	7.11	0.0	0.0	281.1	0.0	281.1
I	06/12/75	02:57	0.6	7.53	0.0	0.0	1725.8	0.0	1725.8
D	06/12/75	03:55	0.3	6.56	0.0	0.0	152.5	0.0	152.5
I	06/12/75	04:03	0.3	6.56	0.0	0.0	305.0	0.0	305.0
I	06/12/75	21:13	0.6	7.81	0.0	0.0	128.0	0.0	128.0
D	06/12/75	21:15	-9.9	7.81	0.0	0.0	128.0	0.0	128.0
D	06/12/75	22:12	0.6	6.97	0.0	0.0	0.0	0.0	0.0
I	06/12/75	22:16	0.6	7.81	0.0	0.0	384.0	0.0	384.0
D	06/12/75	23:12	0.9	7.11	0.0	0.0	140.6	0.0	140.6
I	06/12/75	23:14	0.9	7.39	0.0	0.0	541.1	0.0	541.1
D	06/13/75	00:21	1.1	7.39	0.0	0.0	270.5	0.0	270.5
I	06/13/75	00:30	1.1	7.53	0.0	0.0	929.3	0.0	929.3
D	06/13/75	01:31	1.1	6.70	0.0	0.0	1045.4	0.0	1045.4
I	06/13/75	01:35	1.1	7.25	0.0	0.0	1102.8	0.0	1102.8
D	06/13/75	02:25	1.1	7.25	0.0	0.0	965.0	0.0	965.0
I	06/13/75	02:27	1.1	7.95	0.0	0.0	377.3	0.0	377.3
I	06/13/75	03:11	1.0	7.39	0.0	0.0	0.0	0.0	0.0
D	06/13/75	03:15	0.9	7.25	0.0	0.0	965.0	0.0	965.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	04:00	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/13/75	04:12	0.7	7.95	0.0	0.0	1383.4	0.0	1383.4
I	06/16/75	21:12	0.2	7.53	0.0	0.0	0.0	0.0	0.0
D	06/16/75	21:13	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:12	0.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:29	0.0	6.70	0.0	0.0	0.0	0.0	0.0
I	06/16/75	23:10	-0.1	7.53	0.0	0.0	132.8	0.0	132.8
D	06/16/75	23:11	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:01	0.1	6.70	0.0	0.0	149.3	0.0	149.3
D	06/17/75	00:06	0.0	7.67	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:59	0.2	6.84	0.0	0.0	146.3	0.0	146.3
D	06/17/75	01:11	0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	02:13	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:17	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:08	0.6	7.95	0.0	0.0	0.0	0.0	0.0
D	06/17/75	03:15	0.6	6.56	0.0	0.0	0.0	0.0	0.0
D	06/17/75	04:00	0.8	7.11	0.0	0.0	0.0	0.0	0.0
I	06/17/75	04:01	0.8	7.53	0.0	0.0	132.8	0.0	132.8
I	06/17/75	21:19	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	21:25	0.5	6.79	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:15	0.2	7.39	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:25	0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:16	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	23:35	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	00:14	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	00:18	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:00	-0.2	7.53	0.0	0.0	132.8	0.0	132.8
D	06/18/75	01:11	-0.2	6.84	0.0	0.0	146.3	0.0	146.3

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/18/75	01:53	0.0	7.53	0.0	0.0	132.8	0.0	132.8
D	06/18/75	02:02	0.0	7.21	0.0	0.0	0.0	0.0	0.0
I	06/18/75	02:45	0.2	7.25	0.0	0.0	0.0	0.0	0.0
D	06/18/75	02:58	0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	06/18/75	03:45	0.5	7.81	0.0	0.0	128.0	0.0	128.0
D	06/18/75	03:45	0.5	7.53	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:06	0.6	6.70	0.0	0.0	0.0	0.0	0.0
I	06/18/75	21:14	0.6	7.95	0.0	0.0	0.0	0.0	0.0
D	06/18/75	21:57	0.4	7.81	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:01	0.4	7.39	0.0	0.0	0.0	0.0	0.0
I	06/18/75	22:36	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	22:46	0.3	6.56	0.0	0.0	0.0	0.0	0.0
I	06/18/75	23:31	0.0	9.35	0.0	0.0	0.0	0.0	0.0
D	06/18/75	23:32	0.2	11.16	0.0	0.0	0.0	0.0	0.0
D	06/19/75	00:25	0.0	9.21	0.0	0.0	0.0	0.0	0.0
I	06/19/75	01:17	-0.2	8.51	0.0	0.0	0.0	0.0	0.0
D	06/19/75	01:21	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	06/19/75	02:06	-0.1	8.51	0.0	0.0	117.5	0.0	117.5
D	06/19/75	02:11	-0.1	8.37	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:02	0.0	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	03:03	-9.9	8.23	0.0	0.0	0.0	0.0	0.0
D	06/19/75	03:48	0.2	8.23	0.0	0.0	0.0	0.0	0.0
I	06/19/75	03:49	0.2	9.35	0.0	0.0	0.0	0.0	0.0
I	06/19/75	21:17	0.8	8.93	0.0	0.0	0.0	0.0	0.0
D	06/19/75	21:22	0.8	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:08	0.6	9.35	0.0	0.0	0.0	0.0	0.0
D	06/19/75	22:12	0.6	8.93	0.0	0.0	0.0	0.0	0.0
I	06/19/75	22:55	0.4	9.35	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/24/75	21:49	0.5	7.53	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:37	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:49	0.8	7.95	0.0	0.0	0.0	0.0	0.0
I	06/24/75	23:37	0.8	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:47	0.8	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	00:47	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	00:49	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:32	0.7	7.25	0.0	0.0	275.7	0.0	275.7
D	06/25/75	01:39	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:22	0.5	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:25	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:12	0.2	7.95	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:27	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:10	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:15	-0.2	7.95	0.0	0.0	0.0	0.0	0.0
I	06/26/75	09:03	0.0	7.25	0.0	0.0	0.0	0.0	0.0
D	06/26/75	09:15	0.0	6.84	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:00	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:06	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:45	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:57	0.3	7.25	0.0	0.0	0.0	0.0	0.0
I	06/26/75	12:12	0.8	8.37	0.0	0.0	119.5	0.0	119.5
D	06/26/75	12:26	0.7	23.44	0.0	0.0	0.0	0.0	0.0
I	06/26/75	13:16	0.7	21.06	0.0	0.0	0.0	0.0	0.0
D	06/26/75	13:17	0.8	8.37	0.0	0.0	0.0	0.0	0.0
I	06/26/75	14:15	0.7	8.23	0.0	0.0	0.0	0.0	0.0
D	06/26/75	14:20	0.7	8.09	0.0	0.0	0.0	0.0	0.0
I	06/26/75	15:03	0.5	7.39	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

BAY ANCHOVY DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D		06/26/75	15:10	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D		06/26/75	15:50	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I		06/27/75	10:16	0.1	7.95	0.0	0.0	0.0	0.0	0.0
D		06/27/75	10:25	0.1	6.56	0.0	0.0	152.5	0.0	152.5
I		06/27/75	11:14	0.3	6.56	0.0	0.0	0.0	0.0	0.0
D		06/27/75	11:20	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I		06/27/75	12:08	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D		06/27/75	12:10	0.5	7.39	0.0	0.0	0.0	0.0	0.0
I		06/27/75	12:50	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D		06/27/75	12:58	0.6	7.25	0.0	0.0	0.0	0.0	0.0
I		06/27/75	13:45	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D		06/27/75	13:49	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I		06/27/75	14:40	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D		06/27/75	14:45	0.7	7.53	0.0	0.0	0.0	0.0	0.0
D		06/27/75	15:35	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I		06/27/75	15:36	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D		06/27/75	21:05	0.2	6.84	0.0	0.0	1024.1	0.0	1024.1
I		06/30/75	21:10	0.2	6.70	0.0	0.0	1045.4	0.0	1045.4
D		06/30/75	22:01	0.2	6.56	0.0	0.0	762.6	0.0	762.6
I		06/30/75	22:17	0.2	6.56	0.0	0.0	305.0	0.0	305.0
I		06/30/75	22:58	0.1	6.56	0.0	0.0	1677.7	0.0	1677.7
D		06/30/75	23:05	0.1	6.84	0.0	0.0	731.5	0.0	731.5
I		06/30/75	23:49	0.2	6.56	0.0	0.0	610.0	0.0	610.0
D		06/30/75	23:55	0.2	6.56	0.0	0.0	298.8	0.0	298.8
I		07/01/75	00:45	0.4	7.81	0.0	0.0	384.0	0.0	384.0
D		07/01/75	00:53	0.4	7.95	0.0	0.0	628.8	0.0	628.8
I		07/01/75	01:41	0.5	7.95	0.0	0.0	628.8	377.3	1006.1
D		07/01/75	01:43	0.5	6.84	0.0	0.0	731.5	0.0	731.5

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/01/75	02:25	0.6	7.25	0.0	0.0	1792.1	0.0	1792.1
D	07/01/75	02:33	0.6	7.25	0.0	0.0	275.8	275.7	551.5
I	07/01/75	03:16	0.7	7.39	0.0	0.0	1487.8	0.0	1487.8
D	07/01/75	03:22	0.8	7.39	0.0	0.0	270.5	0.0	270.5
I	07/01/75	04:09	0.8	7.95	0.0	0.0	377.3	0.0	377.3
D	07/01/75	04:09	0.8	7.39	0.0	0.0	946.8	0.0	946.8
I	07/01/75	21:20	0.5	7.81	0.0	0.0	512.0	0.0	512.0
D	07/01/75	21:32	0.5	7.25	0.0	0.0	0.0	0.0	0.0
D	07/01/75	22:20	0.1	6.84	0.0	0.0	0.0	0.0	0.0
I	07/01/75	22:36	0.9	7.95	0.0	0.0	3018.3	1257.7	4276.0
I	07/01/75	23:15	0.9	6.84	0.0	0.0	2779.6	146.3	2925.9
D	07/01/75	23:16	0.1	6.56	0.0	0.0	1525.2	762.6	2287.8
I	07/02/75	00:11	0.2	7.39	0.0	0.0	4057.7	405.9	4463.6
D	07/02/75	00:11	0.2	7.95	0.0	0.0	1383.5	0.0	1383.5
I	07/02/75	01:06	0.3	7.25	0.0	0.0	1792.2	0.0	1792.2
D	07/02/75	01:08	0.3	7.39	0.0	0.0	270.5	0.0	270.5
D	07/02/75	02:09	0.5	7.39	0.0	0.0	946.8	0.0	946.8
I	07/02/75	02:14	0.5	7.95	0.0	0.0	3018.4	0.0	3018.4
I	07/02/75	03:11	0.6	7.95	0.0	0.0	1886.5	0.0	1886.5
D	07/02/75	03:12	0.6	7.81	0.0	0.0	768.1	0.0	768.1
I	07/02/75	04:11	0.7	7.25	0.0	0.0	689.3	0.0	689.3
D	07/02/75	04:11	0.8	7.95	0.0	0.0	1760.7	251.5	2012.2
D	07/03/75	09:13	0.2	6.70	0.0	0.0	298.7	0.0	298.7
I	07/03/75	09:16	0.2	6.84	0.0	0.0	1024.1	0.0	1024.1
I	07/03/75	10:03	0.0	6.56	0.0	0.0	1525.2	0.0	1525.2
D	07/03/75	10:09	0.0	7.95	0.0	0.0	628.8	0.0	628.8
I	07/03/75	11:01	-0.2	7.81	0.0	0.0	1280.1	128.0	1408.1
D	07/03/75	11:02	-0.2	6.56	0.0	0.0	305.0	0.0	305.0

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I		07/03/75	11:52	-0.2	7.95	0.0	0.0	1383.4	0.0	1383.4
D		07/03/75	11:58	-0.2	6.56	0.0	0.0	915.2	0.0	915.2
I		07/03/75	12:51	-0.2	6.84	0.0	0.0	1170.4	0.0	1170.4
D		07/03/75	12:58	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
D		07/03/75	13:50	-0.1	7.81	0.0	0.0	384.0	0.0	384.0
I		07/03/75	13:51	-0.1	6.56	0.0	0.0	305.0	0.0	305.0
I		07/03/75	14:46	0.2	6.56	0.0	0.0	1830.3	305.0	2135.3
D		07/03/75	14:51	0.2	6.56	0.0	0.0	610.0	0.0	610.0
I		07/03/75	15:45	0.5	7.53	0.0	0.0	531.1	0.0	531.1
D		07/03/75	15:46	0.5	7.25	0.0	0.0	965.0	0.0	965.0
I		07/07/75	21:05	1.1	7.25	0.0	0.0	6203.6	137.9	6341.5
D		07/07/75	21:05	1.1	6.70	0.0	0.0	1642.8	149.3	1792.1
I		07/07/75	22:11	1.1	7.81	0.0	0.0	10496.7	256.0	10752.7
D		07/07/75	22:23	1.1	7.39	0.0	0.0	2434.6	946.8	3381.4
I		07/07/75	23:38	0.8	7.53	0.0	0.0	10221.9	0.0	10221.9
D		07/07/75	23:39	0.8	7.39	0.0	0.0	3110.9	541.2	3652.1
I		07/08/75	01:00	0.5	7.81	0.0	0.0	9728.6	0.0	9728.6
D		07/08/75	01:05	0.5	6.70	0.0	0.0	1941.4	1194.7	3136.1
D		07/08/75	02:05	0.2	6.56	0.0	0.0	1067.7	915.1	1982.8
I		07/08/75	02:11	0.2	6.56	0.0	0.0	1525.2	305.0	1830.2
D		07/08/75	02:54	0.1	6.70	0.0	0.0	4330.9	2837.4	7168.3
I		07/08/75	02:56	0.1	7.53	0.0	0.0	4248.1	398.3	4646.4
D		07/08/75	03:54	-0.1	6.70	0.0	0.0	4330.9	2240.0	6570.9
I		07/08/75	03:56	-0.1	6.70	0.0	0.0	5525.7	895.9	6421.6
I		07/08/75	21:25	1.0	6.70	0.0	0.0	4779.0	0.0	4779.0
D		07/08/75	21:31	1.0	6.56	0.0	0.0	3508.0	1220.2	4728.2
I		07/08/75	22:25	1.0	6.56	0.0	0.0	7778.6	305.0	8083.6
D		07/08/75	22:37	1.1	7.25	0.0	0.0	2895.0	413.6	3308.6

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/08/75	23:40	1.0	6.70	0.0	0.0	448.0	5973.7	6421.7
D	07/08/75	23:42	1.0	6.56	0.0	0.0	4880.6	915.1	5795.7
D	07/09/75	00:45	0.8	7.81	0.0	0.0	3200.2	512.0	3712.2
I	07/09/75	00:50	0.7	7.95	0.0	0.0	3521.4	377.3	3898.7
I	07/09/75	01:40	0.5	6.70	0.0	0.0	10454.1	149.3	10603.4
D	07/09/75	01:57	0.5	6.70	0.0	0.0	2688.2	298.7	2986.9
D	07/09/75	02:55	0.2	6.84	0.0	0.0	3072.2	585.2	3657.4
I	07/09/75	02:59	0.2	7.25	0.0	0.0	13647.8	275.8	13923.6
I	07/09/75	03:49	0.0	7.53	0.0	0.0	16461.0	265.6	16726.6
D	07/09/75	03:56	0.0	7.25	0.0	0.0	6065.6	137.9	6203.5
D	07/10/75	09:12	0.5	7.25	0.0	0.0	6479.3	0.0	6479.3
I	07/10/75	09:14	0.5	7.25	0.0	0.0	275.8	0.0	275.8
D	07/10/75	10:14	0.8	7.81	0.0	0.0	4224.3	0.0	4224.3
I	07/10/75	10:15	0.8	7.25	0.0	0.0	3722.1	0.0	3722.1
I	07/10/75	11:32	0.9	6.70	0.0	0.0	3136.2	0.0	3136.2
D	07/10/75	11:50	0.9	7.81	128.0	128.0	11264.8	0.0	11392.8
I	07/10/75	12:55	0.9	7.81	0.0	0.0	5120.4	0.0	5120.4
D	07/10/75	13:04	0.9	6.56	0.0	0.0	12354.2	0.0	12354.2
D	07/10/75	14:09	0.8	7.95	0.0	0.0	5785.1	0.0	5785.1
I	07/10/75	14:18	0.8	6.56	0.0	0.0	3660.6	152.5	3813.1
D	07/10/75	15:50	0.0	7.39	0.0	0.0	5004.4	0.0	5004.4
I	07/10/75	16:05	0.0	6.56	0.0	0.0	17997.5	0.0	17997.5
I	07/11/75	09:03	0.2	7.81	0.0	0.0	3712.2	0.0	3712.2
D	07/11/75	09:15	0.2	6.56	0.0	0.0	5338.2	0.0	5338.2
I	07/11/75	10:39	0.6	7.53	0.0	0.0	5044.6	0.0	5044.6
D	07/11/75	10:45	0.6	7.25	0.0	0.0	7857.8	0.0	7857.8
D	07/11/75	11:55	0.9	7.95	0.0	0.0	11570.2	0.0	11570.2
I	07/11/75	12:04	0.9	7.25	0.0	0.0	11579.9	0.0	11579.9

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

(A) STATION	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/11/75	13:19	0.9	7.95	0.0	377.3	13330.9	0.0	13708.2
D	07/11/75	13:30	0.9	6.56	0.0	0.0	8388.6	0.0	8388.6
D	07/11/75	14:49	0.7	7.95	0.0	0.0	6036.6	0.0	6036.6
I	07/11/75	14:54	0.7	6.84	0.0	0.0	2340.7	0.0	2340.7
D	07/11/75	16:09	0.3	6.70	0.0	149.3	5525.7	0.0	5675.0
I	07/11/75	16:10	0.3	7.53	0.0	0.0	14469.8	0.0	14469.8
I	07/14/75	09:43	-0.2	7.81	0.0	0.0	2048.1	0.0	2048.1
D	07/14/75	10:01	-0.2	7.53	0.0	0.0	4779.0	0.0	4779.0
I	07/14/75	11:17	-0.2	6.70	0.0	0.0	1344.1	0.0	1344.1
D	07/14/75	11:18	-0.2	7.39	0.0	0.0	4192.9	0.0	4192.9
D	07/14/75	14:50	0.9	7.95	0.0	0.0	4779.0	125.8	4904.8
I	07/14/75	14:52	0.9	7.53	0.0	0.0	3451.5	0.0	3451.5
I	07/14/75	16:15	0.8	7.95	0.0	0.0	5659.3	0.0	5659.3
D	07/14/75	16:20	0.8	7.53	0.0	0.0	9027.0	132.8	9159.8
I	07/17/75	13:06	-0.3	7.95	0.0	0.0	1131.9	0.0	1131.9
D	07/17/75	13:16	-0.3	6.70	0.0	0.0	448.0	0.0	448.0
I	07/17/75	14:03	-0.1	6.84	0.0	0.0	438.9	0.0	438.9
D	07/17/75	14:05	-0.1	7.67	0.0	0.0	782.0	0.0	782.0
I	07/17/75	14:45	0.2	6.84	0.0	0.0	585.2	0.0	585.2
D	07/17/75	15:04	0.2	7.53	0.0	0.0	398.3	0.0	398.3
I	07/17/75	15:48	0.2	7.81	0.0	0.0	640.0	128.0	768.0
D	07/17/75	15:54	0.2	7.39	0.0	0.0	541.0	0.0	541.0
I	07/22/75	10:14	0.8	6.84	0.0	0.0	146.3	0.0	146.3
D	07/22/75	10:15	0.8	6.70	0.0	0.0	149.3	0.0	149.3
I	07/22/75	11:13	0.9	7.25	0.0	0.0	689.3	0.0	689.3
D	07/22/75	11:17	0.9	7.11	0.0	0.0	140.6	0.0	140.6
I	07/22/75	12:08	0.6	7.25	0.0	0.0	0.0	0.0	0.0
D	07/22/75	12:15	0.6	6.84	0.0	0.0	585.2	0.0	585.2

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	07/22/75	13:58	0.2	7.25	0.0	0.0	0.0	0.0	0.0
D	07/22/75	13:58	0.2	7.81	0.0	0.0	256.0	0.0	256.0
I	07/22/75	14:45	0.0	7.25	0.0	0.0	413.6	0.0	413.6
D	07/22/75	14:58	0.0	6.70	0.0	0.0	448.0	0.0	448.0
I	07/22/75	15:48	-0.2	7.81	0.0	0.0	384.0	0.0	384.0
D	07/22/75	15:58	-0.2	7.53	0.0	0.0	398.3	0.0	398.3
I	07/25/75	09:11	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	07/25/75	09:20	0.2	6.97	0.0	0.0	286.7	0.0	286.7
I	07/25/75	10:05	0.4	6.84	0.0	0.0	146.3	0.0	146.3
D	07/25/75	10:07	0.5	7.53	0.0	0.0	0.0	0.0	0.0
D	07/28/75	14:39	0.8	7.39	0.0	0.0	270.6	0.0	270.6
I	07/28/75	14:47	0.8	7.81	0.0	0.0	0.0	0.0	0.0
I	07/28/75	15:35	0.7	7.39	0.0	0.0	0.0	0.0	0.0
D	07/28/75	15:38	0.6	6.56	0.0	0.0	152.5	0.0	152.5
I	07/28/75	16:26	0.6	6.70	0.0	0.0	0.0	0.0	0.0
D	07/28/75	16:26	0.6	6.84	0.0	0.0	0.0	0.0	0.0
I	07/28/75	17:12	0.5	6.56	0.0	0.0	0.0	0.0	0.0
D	07/28/75	17:16	0.5	6.97	0.0	0.0	143.4	0.0	143.4
I	07/28/75	18:00	0.3	6.70	0.0	0.0	0.0	0.0	0.0
D	07/28/75	18:08	0.3	7.11	0.0	140.6	0.0	0.0	140.6
D	07/28/75	18:55	0.2	6.70	0.0	0.0	149.3	0.0	149.3
I	07/28/75	18:59	0.2	6.70	0.0	0.0	0.0	0.0	0.0
I	07/28/75	19:52	0.1	6.70	0.0	0.0	149.3	0.0	149.3
D	07/28/75	19:52	0.1	6.70	0.0	0.0	0.0	0.0	0.0
I	07/28/75	20:33	-0.1	6.70	0.0	0.0	2538.8	448.0	2986.8
D	07/28/75	20:35	-0.1	7.81	0.0	0.0	128.0	0.0	128.0
I	07/31/75	21:57	-0.1	6.56	0.0	0.0	4728.1	2440.4	7168.5
I	08/01/75	00:15	-0.3	6.56	0.0	0.0	7931.1	7321.0	15252.1

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	I	08/04/75	20:47	1.1	7.53	0.0	0.0	1858.6	9425.4	11284.0
	D	08/04/75	21:20	1.0	6.70	0.0	0.0	1493.4	896.0	2389.4
	I	08/04/75	22:24	0.8	6.84	0.0	0.0	1170.4	4681.6	5852.0
	D	08/04/75	22:27	0.8	6.56	0.0	0.0	457.5	305.0	762.5
	I	08/04/75	23:59	0.5	6.56	0.0	0.0	1067.6	3050.5	4118.1
	D	08/05/75	00:32	0.4	6.56	0.0	0.0	915.2	457.6	1372.8
	I	08/05/75	01:20	0.2	6.56	0.0	0.0	1677.7	1677.7	3355.4
	D	08/05/75	01:36	0.1	6.84	0.0	0.0	146.3	731.5	877.8
	I	08/05/75	02:55	0.0	7.95	0.0	0.0	1760.7	3269.9	5030.6
	D	08/05/75	03:04	0.0	6.70	0.0	0.0	448.0	298.7	746.7
	I	08/05/75	21:16	1.0	7.53	0.0	0.0	4646.4	10620.	15266.7
	I	08/05/75	22:16	0.8	6.70	0.0	0.0	1642.8	6720.4	8363.2
	I	08/06/75	21:09	0.9	6.84	0.0	0.0	2779.7	4974.2	7753.9
	I	08/06/75	23:07	0.9	7.39	0.0	0.0	3110.9	2570.0	5680.9
	I	08/07/75	22:20	1.0	7.95	0.0	0.0	1383.4	3270.0	4653.4
	I	08/08/75	00:05	0.9	7.53	0.0	0.0	4513.6	2389.6	6903.2
	I	08/11/75	19:34	0.0	6.70	0.0	0.0	1642.7	0.0	1642.7
	D	08/11/75	19:38	0.0	7.25	0.0	0.0	137.9	0.0	137.9
	D	08/11/75	20:28	-0.1	7.81	0.0	0.0	1024.1	128.0	1152.1
	I	08/11/75	20:38	-0.2	6.70	0.0	0.0	1344.1	1642.8	2986.9
	I	08/11/75	21:28	-0.3	6.70	0.0	0.0	1344.1	448.0	1792.1
	D	08/11/75	21:29	-0.3	6.84	0.0	0.0	1024.1	146.3	1170.4
	I	08/11/75	22:27	0.0	7.25	0.0	0.0	2343.5	1792.1	4135.6
	D	08/11/75	22:27	0.0	7.53	0.0	0.0	398.3	132.8	531.1
	I	08/11/75	23:15	0.3	6.56	0.0	0.0	1677.7	915.1	2592.8
	D	08/11/75	23:19	0.3	6.84	0.0	0.0	585.2	146.3	731.5
	I	08/12/75	00:06	0.6	6.70	0.0	0.0	2389.5	2240.1	4629.6
	D	08/12/75	00:14	0.6	7.25	0.0	0.0	413.6	137.9	551.5

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	08/12/75	01:07	0.7	7.53	0.0	0.0	1725.8	1991.4	3717.2
D	08/12/75	01:10	0.8	7.25	0.0	0.0	1516.4	275.8	1792.2
D	08/12/75	02:02	0.9	7.53	0.0	0.0	663.8	0.0	663.8
I	08/12/75	02:05	1.0	7.25	0.0	0.0	2205.7	827.1	3032.8
I	08/18/75	20:05	0.8	6.70	0.0	0.0	298.7	149.3	448.0
D	08/18/75	20:16	0.8	6.70	0.0	0.0	298.7	0.0	298.7
I	08/18/75	21:49	0.9	7.95	0.0	0.0	251.6	0.0	251.6
D	08/18/75	21:58	0.9	6.70	0.0	0.0	149.3	149.3	298.6
I	08/18/75	23:45	0.5	7.81	0.0	0.0	384.0	0.0	384.0
D	08/18/75	23:49	0.5	7.25	0.0	0.0	137.9	0.0	137.9
D	08/19/75	01:45	0.0	7.53	0.0	0.0	929.3	0.0	929.3
I	08/19/75	01:51	0.0	7.95	0.0	0.0	125.8	0.0	125.8
I	08/20/75	20:07	0.3	7.53	0.0	0.0	0.0	265.6	265.6
I	08/20/75	21:45	0.7	7.95	0.0	0.0	251.5	251.6	503.1
I	08/21/75	20:15	0.4	7.81	0.0	0.0	384.0	128.0	512.0
I	08/21/75	21:55	0.8	7.39	0.0	0.0	405.8	0.0	405.8
I	08/25/75	20:03	0.8	7.25	0.0	0.0	275.8	275.7	551.5
D	08/25/75	20:37	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
I	08/25/75	21:12	0.1	7.25	0.0	0.0	0.0	0.0	0.0
D	08/25/75	21:30	0.9	7.25	0.0	0.0	0.0	0.0	0.0
I	08/25/75	22:10	0.3	6.84	0.0	0.0	438.9	438.9	877.8
D	08/25/75	22:15	0.3	7.81	0.0	0.0	0.0	0.0	0.0
I	08/25/75	23:00	0.5	6.84	0.0	0.0	146.3	146.3	292.6
D	08/25/75	23:02	0.5	7.95	0.0	0.0	503.1	0.0	503.1
I	08/25/75	23:46	0.7	7.53	0.0	0.0	265.6	132.8	398.4
D	08/25/75	23:53	0.7	7.95	0.0	0.0	0.0	0.0	0.0
I	08/26/75	00:50	0.8	7.53	0.0	0.0	398.3	265.6	663.9
D	08/26/75	00:58	0.8	7.25	0.0	0.0	275.7	0.0	275.7

(A): I=INTAKE; D=DISCHARGE

BAY ANCHOVY DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	08/26/75	01:39	0.8	6.70	0.0	0.0	746.7	597.3	1344.0
D	08/26/75	01:57	0.8	6.84	0.0	0.0	146.3	0.0	146.3

(A): I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/06/75	03:51	-0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/06/75	03:53	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	06/06/75	04:45	0.4	7.39	0.0	0.0	0.0	0.0	0.0
D	06/06/75	04:48	0.4	6.97	0.0	0.0	0.0	0.0	0.0
I	06/09/75	21:55	0.9	6.56	0.0	0.0	0.0	0.0	0.0
D	06/09/75	21:57	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/09/75	22:05	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D	06/09/75	23:02	1.1	6.56	0.0	0.0	0.0	0.0	0.0
D	06/10/75	00:00	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/10/75	00:04	0.9	7.39	0.0	0.0	0.0	0.0	0.0
D	06/10/75	00:59	0.8	6.70	0.0	0.0	0.0	149.3	149.3
I	06/10/75	01:00	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/10/75	02:00	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/10/75	02:15	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/10/75	03:09	-0.9	7.81	0.0	0.0	0.0	0.0	0.0
I	06/10/75	02:28	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/10/75	04:24	-0.9	7.81	0.0	0.0	0.0	0.0	0.0
I	06/10/75	04:33	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	06/10/75	22:07	1.1	7.95	0.0	0.0	0.0	0.0	0.0
D	06/10/75	22:10	1.1	6.97	0.0	0.0	0.0	0.0	0.0
D	06/10/75	23:32	1.0	6.97	0.0	0.0	0.0	0.0	0.0
I	06/10/75	23:36	1.0	7.95	0.0	0.0	0.0	0.0	0.0
D	06/11/75	01:08	0.8	7.67	0.0	0.0	0.0	0.0	0.0
I	06/11/75	01:10	0.8	7.25	0.0	0.0	0.0	0.0	0.0
D	06/11/75	02:27	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/11/75	02:27	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/11/75	03:40	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/11/75	03:45	0.1	6.70	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	D	06/13/75	04:00	0.7	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/13/75	04:12	0.7	7.95	0.0	0.0	0.0	0.0	0.0
	I	06/16/75	21:12	0.2	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/16/75	21:13	0.2	6.56	0.0	0.0	0.0	0.0	0.0
	D	06/16/75	22:12	0.0	7.39	0.0	0.0	0.0	0.0	0.0
	I	06/16/75	22:29	0.0	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/16/75	23:10	-0.1	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/16/75	23:11	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	00:01	0.1	6.70	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	00:06	0.0	7.67	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	00:59	0.2	6.84	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	01:11	0.2	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	02:13	0.5	7.95	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	02:17	0.5	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	03:08	0.6	7.95	0.0	0.0	0.0	125.8	125.8
	D	06/17/75	03:15	0.6	6.56	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	04:09	0.8	7.11	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	04:01	0.8	7.53	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	21:19	0.5	6.70	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	21:25	0.5	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	22:15	0.2	7.39	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	22:25	0.2	6.70	0.0	0.0	0.0	0.0	0.0
	D	06/17/75	23:16	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/17/75	23:35	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	00:14	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	00:18	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	01:09	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	01:11	-0.2	6.84	0.0	0.0	0.0	0.0	0.0

(A):I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/19/75	23:03	0.4	8.09	0.0	0.0	0.0	0.0	0.0
I	06/19/75	23:26	0.3	9.35	0.0	0.0	0.0	107.0	107.0
D	06/19/75	23:36	0.3	8.09	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:06	0.2	9.21	0.0	0.0	0.0	108.6	108.6
D	06/20/75	00:15	0.2	9.21	0.0	0.0	0.0	0.0	0.0
D	06/20/75	00:56	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/20/75	00:58	0.0	8.93	0.0	0.0	0.0	0.0	0.0
I	06/20/75	01:37	-0.2	8.93	0.0	0.0	0.0	0.0	0.0
D	06/20/75	01:40	-0.2	8.37	0.0	0.0	0.0	0.0	0.0
I	06/23/75	21:10	0.6	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	21:14	0.6	8.09	0.0	0.0	0.0	0.0	0.0
D	06/23/75	22:06	0.8	7.81	0.0	0.0	0.0	0.0	0.0
I	06/23/75	22:14	0.8	9.35	0.0	0.0	0.0	0.0	0.0
I	06/23/75	22:45	0.8	9.63	0.0	0.0	0.0	0.0	0.0
D	06/23/75	23:12	0.8	9.35	0.0	0.0	0.0	0.0	0.0
I	06/23/75	23:47	0.8	9.76	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:03	0.8	8.65	0.0	0.0	0.0	0.0	0.0
I	06/24/75	00:43	0.7	7.53	0.0	0.0	0.0	0.0	0.0
D	06/24/75	00:52	0.7	6.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	01:36	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	01:42	0.5	7.81	0.0	0.0	0.0	0.0	0.0
I	06/24/75	02:23	0.3	6.56	0.0	0.0	0.0	152.5	152.5
D	06/24/75	02:30	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	03:20	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	06/24/75	03:25	0.0	6.56	0.0	0.0	0.0	0.0	0.0
I	06/24/75	04:05	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	04:12	-0.2	6.70	0.0	0.0	0.0	0.0	0.0
I	06/24/75	21:44	0.5	7.95	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

HERRING DENSITY

(A) STATION	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	06/03/75	23:57	0.2	6.56	0.0	0.0	457.5	0.0	457.5
D	06/04/75	00:15	0.2	9.76	0.0	0.0	102.4	0.0	102.4
D	06/04/75	02:09	0.2	7.11	0.0	0.0	140.6	0.0	140.6
I	06/04/75	02:27	0.1	7.81	0.0	0.0	128.0	0.0	128.0
D	06/04/75	04:00	-0.5	6.56	0.0	0.0	457.6	0.0	457.6
I	06/04/75	04:20	-0.5	7.95	0.0	0.0	125.8	0.0	125.8
D	06/04/75	21:36	0.4	7.67	0.0	0.0	130.3	0.0	130.3
I	06/04/75	21:40	0.4	6.84	146.3	0.0	731.5	0.0	731.5
I	06/04/75	22:55	0.3	6.84	0.0	0.0	585.2	0.0	585.2
D	06/04/75	22:57	0.3	7.39	0.0	0.0	0.0	0.0	0.0
I	06/05/75	00:19	0.1	7.39	0.0	0.0	270.6	0.0	270.6
D	06/05/75	00:33	0.1	7.67	0.0	0.0	130.3	0.0	130.3
I	06/05/75	01:38	0.1	7.95	0.0	0.0	628.9	0.0	628.9
D	06/05/75	01:42	0.0	6.56	0.0	0.0	0.0	0.0	0.0
D	06/05/75	03:00	0.0	7.81	0.0	0.0	0.0	256.0	256.0
I	06/05/75	03:03	0.0	6.56	0.0	0.0	0.0	0.0	0.0
I	06/05/75	04:10	-0.3	7.53	0.0	0.0	531.0	0.0	531.0
D	06/05/75	04:16	-0.3	6.56	0.0	0.0	305.0	0.0	305.0
D	06/05/75	21:45	1.0	7.11	0.0	0.0	140.6	0.0	140.6
I	06/05/75	21:53	0.9	6.56	0.0	0.0	0.0	0.0	0.0
D	06/05/75	23:05	0.7	7.67	0.0	0.0	260.7	0.0	260.7
I	06/05/75	23:09	0.7	6.56	0.0	0.0	0.0	0.0	0.0
D	06/06/75	00:20	0.4	7.39	0.0	0.0	135.3	0.0	135.3
I	06/06/75	00:30	0.4	7.25	0.0	0.0	0.0	0.0	0.0
I	06/06/75	01:37	0.3	7.39	0.0	0.0	0.0	0.0	0.0
D	06/06/75	01:39	0.3	7.11	0.0	0.0	0.0	0.0	0.0
D	06/06/75	02:49	0.2	6.97	0.0	0.0	0.0	0.0	0.0
I	06/06/75	02:51	0.2	7.95	0.0	0.0	125.8	0.0	125.8

(A): I=INTAKE; D=DISCHARGE

HERRING DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I	05/06/75	03:51	-0.2	6.56	0.0	0.0	152.5	0.0	152.5
D	05/06/75	03:53	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
I	05/06/75	04:46	0.4	7.39	0.0	0.0	0.0	0.0	0.0
D	05/06/75	04:48	0.4	6.97	0.0	0.0	0.0	0.0	0.0
I	05/09/75	21:55	0.9	6.56	0.0	0.0	0.0	0.0	0.0
D	05/09/75	21:57	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	05/09/75	22:05	1.0	6.56	0.0	0.0	0.0	0.0	0.0
D	05/09/75	23:02	1.1	6.56	0.0	0.0	0.0	0.0	0.0
D	05/10/75	00:00	1.0	7.39	0.0	0.0	0.0	0.0	0.0
I	05/10/75	00:04	0.9	7.39	0.0	0.0	0.0	0.0	0.0
D	05/10/75	00:59	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	05/10/75	01:00	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	05/10/75	02:00	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	05/10/75	02:15	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	05/10/75	03:09	-9.9	7.81	0.0	0.0	256.0	0.0	256.0
I	05/10/75	03:28	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	05/10/75	04:24	-9.9	7.81	0.0	0.0	128.0	0.0	128.0
I	05/10/75	04:33	0.8	6.70	0.0	0.0	0.0	0.0	0.0
I	05/10/75	22:07	1.1	7.95	0.0	0.0	125.8	0.0	125.8
D	05/10/75	22:10	1.1	6.97	0.0	0.0	143.4	0.0	143.4
D	05/10/75	23:32	1.0	6.97	0.0	0.0	286.7	0.0	286.7
I	05/10/75	23:36	1.0	7.95	0.0	0.0	125.8	0.0	125.8
D	05/11/75	01:08	0.8	7.67	0.0	0.0	0.0	0.0	0.0
I	05/11/75	01:10	0.8	7.25	0.0	0.0	137.9	0.0	137.9
D	05/11/75	02:27	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	05/11/75	02:27	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	05/11/75	03:48	0.0	7.81	0.0	0.0	0.0	0.0	0.0
I	05/11/75	03:45	0.1	6.70	0.0	0.0	149.3	0.0	149.3

(A): I=INTAKE; D=DISCHARGE

HERRING DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	D	06/11/75	21:12	0.3	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/11/75	21:25	0.3	7.95	0.0	0.0	0.0	0.0	0.0
	D	06/11/75	22:33	0.8	7.67	0.0	0.0	391.0	0.0	391.0
	I	06/11/75	22:37	0.8	7.39	0.0	0.0	0.0	0.0	0.0
	D	06/11/75	23:35	1.0	7.67	0.0	0.0	0.0	0.0	0.0
	I	06/11/75	23:41	1.0	6.56	0.0	0.0	0.0	0.0	0.0
	I	06/12/75	00:52	1.0	7.95	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	00:53	1.0	7.39	0.0	0.0	0.0	0.0	0.0
	I	06/12/75	01:51	0.8	7.95	0.0	0.0	125.8	0.0	125.8
	D	06/12/75	01:53	0.8	7.39	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	02:53	0.6	7.11	0.0	0.0	0.0	0.0	0.0
	I	06/12/75	02:57	0.6	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	03:55	0.3	6.56	0.0	0.0	152.5	0.0	152.5
	I	06/12/75	04:03	0.3	6.56	0.0	0.0	0.0	0.0	0.0
	I	06/12/75	21:13	0.6	7.81	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	21:15	-9.9	7.81	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	22:12	0.6	6.97	0.0	0.0	143.4	0.0	143.4
	I	06/12/75	22:16	0.6	7.81	0.0	0.0	0.0	0.0	0.0
	D	06/12/75	23:12	0.9	7.11	0.0	0.0	0.0	0.0	0.0
	I	06/12/75	23:14	0.9	7.39	0.0	0.0	0.0	0.0	0.0
	D	06/13/75	00:21	1.1	7.39	0.0	0.0	0.0	0.0	0.0
	I	06/13/75	00:30	1.1	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/13/75	01:31	1.1	6.79	0.0	0.0	0.0	0.0	0.0
	I	06/13/75	01:35	1.1	7.25	0.0	0.0	0.0	0.0	0.0
	D	06/13/75	02:25	1.1	7.25	0.0	0.0	137.9	0.0	137.9
	I	06/13/75	02:27	1.1	7.95	0.0	0.0	125.8	0.0	125.8
	I	06/13/75	03:11	1.0	7.39	0.0	0.0	0.0	0.0	0.0
	D	06/13/75	03:15	0.9	7.25	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE, D=DISCHARGE

HERRING DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/13/75	04:00	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/13/75	04:12	0.7	7.95	0.0	0.0	0.0	0.0	0.0
I	06/16/75	21:12	0.2	7.53	0.0	0.0	0.0	0.0	0.0
D	06/16/75	21:13	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/16/75	22:12	0.0	7.39	0.0	0.0	0.0	0.0	0.0
I	06/16/75	22:29	0.0	6.70	0.0	0.0	0.0	0.0	0.0
I	06/16/75	23:10	-0.1	7.53	0.0	0.0	0.0	132.8	132.8
D	06/16/75	23:11	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:01	0.1	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	00:06	0.0	7.67	0.0	0.0	0.0	0.0	0.0
I	06/17/75	00:59	0.2	6.84	0.0	0.0	0.0	0.0	0.0
D	06/17/75	01:11	0.2	7.81	0.0	0.0	384.0	0.0	384.0
I	06/17/75	02:13	0.5	7.95	0.0	0.0	0.0	0.0	0.0
D	06/17/75	02:17	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	03:08	0.6	7.95	0.0	0.0	125.8	0.0	125.8
D	06/17/75	03:15	0.6	6.56	0.0	0.0	610.0	0.0	610.0
D	06/17/75	04:00	0.8	7.11	0.0	0.0	140.6	0.0	140.6
I	06/17/75	04:01	0.8	7.53	0.0	0.0	0.0	0.0	0.0
I	06/17/75	21:19	0.5	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	21:25	0.5	6.70	0.0	0.0	0.0	0.0	0.0
I	06/17/75	22:15	0.2	7.39	0.0	0.0	0.0	0.0	0.0
D	06/17/75	22:25	0.2	6.70	0.0	0.0	0.0	0.0	0.0
D	06/17/75	23:16	-0.1	7.81	0.0	0.0	0.0	0.0	0.0
I	06/17/75	23:35	-0.1	6.84	0.0	0.0	0.0	0.0	0.0
D	06/18/75	00:14	-0.2	6.84	0.0	0.0	0.0	0.0	0.0
I	06/18/75	00:18	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
I	06/18/75	01:00	-0.2	7.53	0.0	0.0	0.0	0.0	0.0
D	06/18/75	01:11	-0.2	6.84	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

HERRING DENSITY

STATION	(A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
	I	06/18/75	01:53	0.0	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	02:02	0.0	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	02:45	0.2	7.25	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	02:58	0.2	7.53	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	03:45	0.5	7.81	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	03:45	0.5	7.53	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	21:06	0.6	6.70	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	21:14	0.6	7.95	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	21:57	0.4	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	22:01	0.4	7.39	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	22:36	0.3	6.84	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	22:46	0.3	6.56	0.0	0.0	0.0	0.0	0.0
	I	06/18/75	23:31	0.0	9.35	0.0	0.0	0.0	0.0	0.0
	D	06/18/75	23:32	0.2	11.16	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	00:25	0.0	9.21	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	01:17	-0.2	8.51	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	01:21	-0.2	7.81	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	02:06	-0.1	8.51	0.0	0.0	117.5	0.0	117.5
	D	06/19/75	02:11	-0.1	8.37	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	03:02	0.0	9.35	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	03:03	-9.9	8.23	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	03:48	0.2	8.23	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	03:49	0.2	9.35	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	21:17	0.8	8.93	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	21:22	0.8	8.93	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	22:08	0.6	9.35	0.0	0.0	0.0	0.0	0.0
	D	06/19/75	22:12	0.6	8.93	0.0	0.0	0.0	0.0	0.0
	I	06/19/75	22:55	0.4	9.35	0.0	0.0	107.0	0.0	107.0

(A): I=INTAKE; D=DISCHARGE

HERRING DENSITY

STATION (A)	DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D	06/24/75	21:49	0.5	7.53	0.0	0.0	0.0	0.0	0.0
I	06/24/75	22:37	0.8	7.95	0.0	0.0	0.0	0.0	0.0
D	06/24/75	22:49	0.8	7.95	0.0	0.0	0.0	125.8	125.8
I	06/24/75	23:37	0.8	6.84	0.0	0.0	0.0	0.0	0.0
D	06/24/75	23:47	0.8	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	00:47	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	00:49	0.8	6.84	0.0	0.0	0.0	0.0	0.0
I	06/25/75	01:32	0.7	7.25	0.0	0.0	0.0	0.0	0.0
D	06/25/75	01:39	0.7	6.70	0.0	0.0	0.0	0.0	0.0
I	06/25/75	02:22	0.5	7.39	0.0	0.0	0.0	0.0	0.0
D	06/25/75	02:25	0.5	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	03:12	0.2	7.95	0.0	0.0	0.0	0.0	0.0
D	06/25/75	03:27	0.2	6.56	0.0	0.0	0.0	0.0	0.0
D	06/25/75	04:10	0.2	6.56	0.0	0.0	0.0	0.0	0.0
I	06/25/75	04:15	-0.2	7.95	0.0	0.0	0.0	0.0	0.0
I	06/26/75	09:08	0.0	7.25	0.0	0.0	0.0	0.0	0.0
D	06/26/75	09:15	0.0	6.84	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:00	0.3	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:06	0.3	6.70	0.0	0.0	0.0	0.0	0.0
I	06/26/75	10:45	0.5	6.84	0.0	0.0	0.0	0.0	0.0
D	06/26/75	10:57	0.3	7.25	0.0	0.0	0.0	0.0	0.0
I	06/26/75	12:12	0.8	8.37	0.0	0.0	0.0	0.0	0.0
D	06/26/75	12:25	0.7	23.44	0.0	0.0	0.0	0.0	0.0
I	06/25/75	13:15	0.7	21.06	0.0	0.0	0.0	0.0	0.0
D	06/26/75	13:17	0.8	8.37	0.0	0.0	0.0	0.0	0.0
I	06/26/75	14:15	0.7	8.23	0.0	0.0	0.0	0.0	0.0
D	06/26/75	14:20	0.7	8.09	0.0	0.0	0.0	0.0	0.0
I	06/26/75	15:00	0.5	7.39	0.0	0.0	0.0	0.0	0.0

(A): I=INTAKE; D=DISCHARGE

3. Entrainment Abundance Raw Data Summaries

3.1 BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1975

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/23/75	S	05:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
04/23/75	M	05:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
04/23/75	B	05:30	0.0	90.90	0.0	0.0	0.0	0.0	0.0
04/29/75	S	12:30	0.7	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	12:30	0.7	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	12:30	0.7	90.50	0.0	0.0	0.0	0.0	0.0
04/29/75	S	20:00	-0.2	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	20:00	-0.2	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	20:00	-0.2	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	00:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
04/30/75	M	00:30	0.8	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	00:30	0.8	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:30	0.4	97.20	0.0	0.0	0.0	0.0	0.0
04/30/75	M	05:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:30	0.2	97.20	0.0	0.0	0.0	0.0	0.0
05/06/75	M	12:30	0.2	77.40	0.0	0.0	0.0	0.0	0.0
05/06/75	B	12:30	0.2	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	20:00	1.0	99.45	0.0	0.0	0.0	0.0	0.0
05/06/75	M	20:00	1.0	153.90	0.0	0.0	0.0	0.0	0.0
05/06/75	B	20:00	1.0	144.90	0.0	0.0	0.0	0.0	0.0
05/07/75	S	00:30	0.4	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	00:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	00:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/07/75	S	15:18	0.5	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	15:18	0.5	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	15:18	0.5	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	12:30	-0.3	97.20	0.0	0.0	10.3	0.0	10.3

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/03/75	M	12:30	-0.3	77.40	0.0	12.9	0.0	0.0	12.9
06/03/75	B	12:30	-0.3	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	20:30	0.6	97.20	0.0	0.0	0.0	0.0	0.0
06/03/75	M	20:30	0.6	77.40	0.0	0.0	0.0	0.0	0.0
06/03/75	B	20:30	0.6	90.90	0.0	0.0	22.0	0.0	22.0
06/04/75	S	00:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
06/04/75	M	00:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	B	00:30	0.0	90.90	0.0	22.0	0.0	0.0	22.0
06/04/75	S	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	M	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	B	04:30	0.5	90.90	0.0	0.0	33.0	0.0	33.0
06/10/75	S	13:27	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:27	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:27	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:39	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:39	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:39	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:50	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:50	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:50	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:01	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:01	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:01	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:12	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:12	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:12	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:22	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:22	0.3	4.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	B	20:22	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:41	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:41	0.3	4.30	0.0	0.0	232.6	0.0	232.6
06/10/75	B	20:41	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:54	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:54	0.3	4.30	0.0	0.0	930.2	0.0	930.2
06/10/75	B	20:54	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	21:10	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	21:10	0.3	4.30	0.0	0.0	232.6	0.0	232.6
06/10/75	B	21:10	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	21:27	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	21:27	0.3	4.30	0.0	0.0	232.6	0.0	232.6
06/10/75	B	21:27	0.3	5.05	0.0	0.0	594.1	0.0	594.1
06/11/75	S	00:07	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:07	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:07	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:19	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:19	0.9	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	00:19	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:31	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:31	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:31	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:43	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:43	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:43	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:58	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:58	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:58	0.9	5.05	0.0	0.0	198.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	S	05:00	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	05:00	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:00	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:17	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.2	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	05:17	-0.2	5.05	0.0	0.0	594.1	0.0	594.1
06/11/75	S	05:32	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:32	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:32	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/11/75	S	05:46	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:46	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:46	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	06:02	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	06:02	-0.2	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	06:02	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:58	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:58	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:58	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:10	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:10	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:10	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:21	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:21	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:21	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:32	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:32	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:32	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:41	0.8	5.40	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	14:41	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:41	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	19:51	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	19:51	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	19:51	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:02	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:02	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:02	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:15	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:15	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:15	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:25	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:25	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:25	0.6	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	20:36	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:36	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:36	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	23:27	0.1	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	23:27	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	23:27	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	23:44	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	23:44	0.1	4.30	0.0	0.0	465.1	0.0	465.1
06/17/75	B	23:44	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	00:03	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:03	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:03	0.1	5.05	0.0	0.0	792.1	0.0	792.1
06/18/75	S	00:14	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:14	0.1	4.30	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	00:14	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	00:29	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:29	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:29	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	03:50	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	03:50	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	03:50	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:04	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:04	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	04:04	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:15	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:15	0.5	4.30	0.0	0.0	232.6	0.0	232.6
06/18/75	B	04:15	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:27	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:27	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:27	0.5	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	14:38	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:38	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:38	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:44	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:44	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:44	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:58	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:58	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:14	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:14	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	S	23:20	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:20	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:20	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:29	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:29	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:29	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:39	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:39	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:39	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:43	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:43	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:43	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:55	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:55	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:55	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:05	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:05	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:05	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:15	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:15	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:15	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/25/75	S	05:28	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:28	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:28	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	13:48	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	13:48	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	13:48	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

: WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/03/75	M	12:30	-0.3	77.40	0.0	0.0	0.0	0.0	0.0
06/03/75	B	12:30	-0.3	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	20:30	0.6	97.20	0.0	0.0	0.0	0.0	0.0
06/03/75	M	20:30	0.6	77.40	0.0	0.0	0.0	0.0	0.0
06/03/75	B	20:30	0.6	90.90	0.0	0.0	11.0	0.0	11.0
06/04/75	S	00:30	0.0	97.20	0.0	0.0	20.6	0.0	20.6
06/04/75	M	00:30	0.0	77.40	0.0	0.0	12.9	0.0	12.9
06/04/75	B	00:30	0.0	90.90	0.0	0.0	0.0	0.0	0.0
06/04/75	S	04:30	0.5	77.40	0.0	0.0	12.9	0.0	12.9
06/04/75	M	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	B	04:30	0.5	90.90	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:27	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:27	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:27	0.6	5.05	0.0	0.0	396.0	0.0	396.0
06/10/75	S	13:39	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:39	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:39	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:50	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:50	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:50	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:01	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:01	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:01	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:12	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:12	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:12	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:22	0.3	5.40	0.0	0.0	185.2	0.0	185.2
06/10/75	M	20:22	0.3	4.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	B	20:22	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:41	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:41	0.3	4.30	0.0	0.0	465.1	0.0	465.1
06/10/75	B	20:41	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:54	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:54	0.3	4.30	0.0	0.0	465.1	0.0	465.1
06/10/75	B	20:54	0.3	5.05	0.0	0.0	198.0	0.0	198.0
06/10/75	S	21:10	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	21:10	0.3	4.30	0.0	0.0	465.1	0.0	465.1
06/10/75	B	21:10	0.3	5.05	0.0	0.0	198.0	0.0	198.0
06/10/75	S	21:27	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	21:27	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	21:27	0.3	5.05	0.0	0.0	198.0	0.0	198.0
06/11/75	S	00:07	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:07	0.9	4.30	0.0	0.0	465.1	0.0	465.1
06/11/75	B	00:07	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:19	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:19	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:19	0.9	5.05	0.0	0.0	198.0	0.0	198.0
06/11/75	S	00:31	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:31	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:31	0.9	5.05	0.0	0.0	396.0	0.0	396.0
06/11/75	S	00:43	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:43	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:43	0.9	5.05	0.0	0.0	594.1	0.0	594.1
06/11/75	S	00:58	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:58	0.9	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	00:58	0.9	5.05	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

WHITE PERCH DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	S	05:00	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:00	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:00	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:17	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:17	-0.2	5.05	0.0	0.0	396.0	0.0	396.0
06/11/75	S	05:32	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:32	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:32	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/11/75	S	05:46	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:46	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:46	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/11/75	S	06:02	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	06:02	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	06:02	-0.2	5.05	0.0	0.0	396.0	0.0	396.0
06/17/75	S	13:58	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:58	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:58	0.8	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	14:10	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:10	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:10	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:21	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:21	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:21	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:32	0.8	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	14:32	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:32	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:41	0.8	5.40	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	14:41	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:41	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	19:51	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	19:51	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	19:51	0.6	5.05	0.0	0.0	594.1	0.0	594.1
06/17/75	S	20:02	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:02	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	20:02	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:15	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:15	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:15	0.6	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	20:25	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:25	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:25	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:36	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:36	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:36	0.6	5.05	0.0	0.0	396.0	0.0	396.0
06/17/75	S	23:27	0.1	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	23:27	0.1	4.30	0.0	0.0	930.2	0.0	930.2
06/17/75	B	23:27	0.1	5.05	0.0	0.0	792.1	0.0	792.1
06/17/75	S	23:44	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	23:44	0.1	4.30	0.0	0.0	697.7	0.0	697.7
06/17/75	B	23:44	0.1	5.05	0.0	0.0	1188.1	0.0	1188.1
06/18/75	S	00:03	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:03	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:03	0.1	5.05	0.0	0.0	594.1	0.0	594.1
06/18/75	S	00:14	0.1	5.40	0.0	0.0	185.2	0.0	185.2
06/18/75	M	00:14	0.1	4.30	0.0	0.0	697.7	0.0	697.7

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	00:14	0.1	5.05	0.0	0.0	396.0	198.0	594.0
06/18/75	S	00:29	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:29	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:29	0.1	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	03:50	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	03:50	0.5	4.30	0.0	0.0	930.2	0.0	930.2
06/18/75	B	03:50	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:04	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:04	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	04:04	0.5	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	04:15	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:15	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	04:15	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:27	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:27	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:27	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	14:38	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:38	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:38	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13.44	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:44	0.3	4.30	0.0	0.0	465.1	0.0	465.1
06/24/75	B	13:44	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:58	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:58	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:14	0.3	5.40	0.0	185.2	0.0	0.0	185.2
06/24/75	M	14:14	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

: WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:21	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:21	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:21	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:33	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:33	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:33	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:30	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:30	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:30	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:47	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:47	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:47	0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/24/75	S	20:53	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:53	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:53	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:05	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:05	0.2	4.30	0.0	0.0	232.6	0.0	232.6
06/24/75	B	21:05	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:19	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:19	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	21:19	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:00	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:00	0.8	4.30	0.0	0.0	465.1	0.0	465.1
06/24/75	B	23:00	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:09	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:09	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:09	0.8	5.05	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	S	23:20	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:20	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:20	0.8	5.05	0.0	0.0	198.0	0.0	198.0
06/24/75	S	23:29	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:29	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:29	0.8	5.05	0.0	0.0	198.0	0.0	198.0
06/24/75	S	23:39	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:39	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:39	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:43	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:43	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:43	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:55	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:55	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:55	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/25/75	S	05:05	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:05	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:05	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:15	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
06/25/75	M	05:15	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:15	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:28	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:28	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:28	-0.2	5.05	0.0	0.0	396.0	0.0	396.0
07/01/75	S	13:48	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	13:48	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	13:48	0.3	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	M	13:58	0.3	4.30	0.0	0.0	232.6	0.0	232.6
07/01/75	B	13:58	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	14:09	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	14:09	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	14:09	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	14:18	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	14:18	0.3	4.30	0.0	0.0	232.6	0.0	232.6
07/01/75	B	14:18	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	14:30	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	14:30	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	14:30	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	19:32	0.5	5.40	0.0	0.0	185.2	0.0	185.2
07/01/75	M	19:32	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:32	0.5	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	19:44	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:44	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:44	0.5	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	19:54	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:54	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:54	0.5	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	20:04	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:04	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:04	0.5	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	20:13	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:13	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:13	0.5	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:22	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:22	0.1	4.30	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE, M=MIDDLE, B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	S	23:34	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:34	0.1	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:34	0.1	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:49	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:49	0.1	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:49	0.1	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:12	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:12	0.1	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:12	0.1	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:24	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:24	0.1	4.30	0.0	0.0	232.6	0.0	232.6
07/02/75	B	00:24	0.1	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	04:50	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	04:50	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	04:50	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	05:00	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:00	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:00	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	05:09	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:09	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:09	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	05:17	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:17	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:17	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	05:26	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:26	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:26	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/08/75	S	14:10	0.2	5.40	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

: WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/16/75	B	05:29	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/16/75	S	05:41	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/16/75	M	05:41	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/16/75	B	05:41	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/16/75	S	05:51	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/16/75	M	05:51	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/16/75	B	05:51	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/22/75	S	12:15	0.7	45.30	0.0	0.0	0.0	0.0	0.0
07/22/75	M	12:15	0.7	44.70	0.0	0.0	0.0	0.0	0.0
07/22/75	B	12:15	0.7	43.80	0.0	0.0	0.0	0.0	0.0
07/22/75	S	12:52	0.7	45.30	0.0	0.0	0.0	0.0	0.0
07/22/75	M	12:52	0.7	44.70	0.0	0.0	0.0	0.0	0.0
07/22/75	B	12:52	0.7	43.80	0.0	0.0	0.0	0.0	0.0
07/22/75	S	20:00	0.5	32.40	0.0	0.0	0.0	0.0	0.0
07/22/75	M	20:00	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/22/75	B	20:00	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/22/75	S	20:36	0.5	32.40	0.0	0.0	0.0	0.0	0.0
07/22/75	M	20:36	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/22/75	B	20:36	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/23/75	S	00:00	0.9	45.30	0.0	0.0	0.0	0.0	0.0
07/23/75	M	00:00	0.9	44.70	0.0	0.0	0.0	0.0	0.0
07/23/75	B	00:00	0.9	43.80	0.0	0.0	0.0	0.0	0.0
07/23/75	S	00:38	0.9	45.30	0.0	0.0	0.0	0.0	0.0
07/23/75	M	00:38	0.9	44.70	0.0	0.0	0.0	0.0	0.0
07/23/75	B	00:38	0.9	43.80	0.0	0.0	0.0	0.0	0.0
07/23/75	S	04:40	-0.1	45.30	0.0	0.0	0.0	0.0	0.0
07/23/75	M	04:40	-0.1	44.70	0.0	0.0	0.0	0.0	0.0
07/23/75	B	04:40	-0.1	43.80	0.0	0.0	22.8	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/03/75	M	12:30	-0.3	77.40	0.0	0.0	0.0	0.0	0.0
05/03/75	B	12:30	-0.3	90.90	0.0	0.0	0.0	0.0	0.0
05/03/75	S	20:30	0.6	97.20	0.0	0.0	0.0	0.0	0.0
05/03/75	M	20:30	0.6	77.40	0.0	0.0	0.0	0.0	0.0
05/03/75	B	20:30	0.6	90.90	0.0	0.0	0.0	0.0	0.0
05/04/75	S	00:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
05/04/75	M	00:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
05/04/75	B	00:30	0.0	90.90	0.0	0.0	0.0	0.0	0.0
05/04/75	S	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
05/04/75	M	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
05/04/75	B	04:30	0.5	90.90	0.0	0.0	0.0	0.0	0.0
05/10/75	S	13:27	0.6	5.40	0.0	0.0	0.0	0.0	0.0
05/10/75	M	13:27	0.6	4.30	0.0	0.0	1860.5	0.0	1860.5
05/10/75	B	13:27	0.6	5.05	0.0	0.0	594.1	0.0	594.1
05/10/75	S	13:39	0.6	5.40	0.0	0.0	0.0	0.0	0.0
05/10/75	M	13:39	0.6	4.30	0.0	0.0	3953.5	0.0	3953.5
05/10/75	B	13:39	0.6	5.05	0.0	0.0	396.0	0.0	396.0
05/10/75	S	13:50	0.6	5.40	0.0	0.0	370.4	0.0	370.4
05/10/75	M	13:50	0.6	4.30	0.0	0.0	13488.	0.0	13488.4
05/10/75	B	13:50	0.6	5.05	0.0	0.0	792.1	0.0	792.1
05/10/75	S	14:01	0.6	5.40	0.0	0.0	370.4	0.0	370.4
05/10/75	M	14:01	0.6	4.30	0.0	0.0	1627.9	0.0	1627.9
05/10/75	B	14:01	0.6	5.05	0.0	0.0	1980.2	0.0	1980.2
05/10/75	S	14:12	0.6	5.40	0.0	0.0	0.0	0.0	0.0
05/10/75	M	14:12	0.6	4.30	0.0	0.0	1627.9	0.0	1627.9
05/10/75	B	14:12	0.6	5.05	0.0	0.0	792.1	0.0	792.1
05/10/75	S	20:22	0.3	5.40	0.0	0.0	1296.3	0.0	1296.3
05/10/75	M	20:22	0.3	4.30	0.0	0.0	1395.3	0.0	1395.3

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	B	20:22	0.3	5.05	0.0	0.0	198.0	0.0	198.0
06/10/75	S	20:41	0.3	5.40	0.0	0.0	1481.5	0.0	1481.5
06/10/75	M	20:41	0.3	4.30	0.0	0.0	5348.8	0.0	5348.8
06/10/75	B	20:41	0.3	5.05	0.0	0.0	1980.2	0.0	1980.2
06/10/75	S	20:54	0.3	5.40	0.0	0.0	4259.3	0.0	4259.3
06/10/75	M	20:54	0.3	4.30	0.0	0.0	4651.2	0.0	4651.2
06/10/75	B	20:54	0.3	5.05	0.0	0.0	1584.2	0.0	1584.2
06/10/75	S	21:10	0.3	5.40	0.0	0.0	1481.5	0.0	1481.5
06/10/75	M	21:10	0.3	4.30	0.0	0.0	697.7	0.0	697.7
06/10/75	B	21:10	0.3	5.05	0.0	0.0	990.1	0.0	990.1
06/10/75	S	21:27	0.3	5.40	0.0	0.0	2592.6	0.0	2592.6
06/10/75	M	21:27	0.3	4.30	0.0	0.0	5814.0	0.0	5814.0
06/10/75	B	21:27	0.3	5.05	0.0	0.0	4554.5	0.0	4554.5
06/11/75	S	00:07	0.9	5.40	0.0	0.0	555.6	0.0	555.6
06/11/75	M	00:07	0.9	4.30	0.0	0.0	930.2	0.0	930.2
06/11/75	B	00:07	0.9	5.05	0.0	0.0	1782.2	0.0	1782.2
06/11/75	S	00:19	0.9	5.40	0.0	0.0	925.9	0.0	925.9
06/11/75	M	00:19	0.9	4.30	0.0	0.0	465.1	0.0	465.1
06/11/75	B	00:19	0.9	5.05	0.0	0.0	2574.3	0.0	2574.3
06/11/75	S	00:31	0.9	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	00:31	0.9	4.30	0.0	0.0	1627.9	0.0	1627.9
06/11/75	B	00:31	0.9	5.05	0.0	0.0	990.1	0.0	990.1
06/11/75	S	00:43	0.9	5.40	0.0	0.0	555.6	0.0	555.6
06/11/75	M	00:43	0.9	4.30	0.0	0.0	697.7	0.0	697.7
06/11/75	B	00:43	0.9	5.05	0.0	0.0	594.1	0.0	594.1
06/11/75	S	00:58	0.9	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	00:58	0.9	4.30	0.0	0.0	1395.3	0.0	1395.3
06/11/75	B	00:58	0.9	5.05	0.0	0.0	1386.1	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	S	05:00	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:00	-0.2	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	05:00	-0.2	5.05	0.0	0.0	396.0	0.0	396.0
06/11/75	S	05:17	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:17	-0.2	5.05	0.0	0.0	792.1	0.0	792.1
06/11/75	S	05:32	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:32	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:32	-0.2	5.05	0.0	0.0	396.0	0.0	396.0
06/11/75	S	05:46	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:46	-0.2	4.30	0.0	0.0	1860.5	0.0	1860.5
06/11/75	B	05:46	-0.2	5.05	0.0	0.0	792.1	0.0	792.1
06/11/75	S	06:02	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	06:02	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	06:02	-0.2	5.05	0.0	0.0	1584.2	0.0	1584.2
06/17/75	S	13:58	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:58	0.8	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	13:58	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:10	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:10	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:10	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:21	0.8	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	14:21	0.8	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	14:21	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:32	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:32	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:32	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:41	0.8	5.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	14:41	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:41	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	19:51	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	19:51	0.6	4.30	0.0	0.0	697.7	0.0	697.7
06/17/75	B	19:51	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:02	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:02	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:02	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:15	0.6	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	20:15	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	20:15	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:25	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:25	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	20:25	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:36	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:36	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	20:36	0.6	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	23:27	0.1	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	23:27	0.1	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	23:27	0.1	5.05	0.0	0.0	396.0	0.0	396.0
06/17/75	S	23:44	0.1	5.40	0.0	0.0	370.4	0.0	370.4
06/17/75	M	23:44	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	23:44	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	00:03	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:03	0.1	4.30	0.0	0.0	1162.8	0.0	1162.8
06/18/75	B	00:03	0.1	5.05	0.0	0.0	594.1	0.0	594.1
06/18/75	S	00:14	0.1	5.40	0.0	0.0	185.2	0.0	185.2
06/18/75	M	00:14	0.1	4.30	0.0	0.0	465.1	0.0	465.1

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	00:14	0.1	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	00:29	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:29	0.1	4.30	0.0	0.0	232.6	0.0	232.6
06/18/75	B	00:29	0.1	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	03:50	0.5	5.40	0.0	0.0	185.2	0.0	185.2
06/18/75	M	03:50	0.5	4.30	0.0	0.0	232.6	0.0	232.6
06/18/75	B	03:50	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:04	0.5	5.40	0.0	0.0	555.6	0.0	555.6
06/18/75	M	04:04	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	04:04	0.5	5.05	0.0	0.0	594.1	0.0	594.1
06/18/75	S	04:15	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:15	0.5	4.30	0.0	0.0	465.1	0.0	465.1
06/18/75	B	04:15	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:27	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:27	0.5	4.30	0.0	0.0	465.1	0.0	465.1
06/18/75	B	14:27	0.5	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	14:38	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:38	0.5	4.30	0.0	0.0	465.1	0.0	465.1
06/18/75	B	14:38	0.5	5.05	0.0	0.0	198.0	0.0	198.0
06/24/75	S	13:44	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:44	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:44	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:58	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:58	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:14	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:14	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:21	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:21	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:21	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:33	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:33	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:33	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:30	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:30	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:30	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:47	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:47	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:47	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:53	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:53	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:53	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:05	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:05	0.2	4.30	0.0	0.0	232.5	0.0	232.5
06/24/75	B	21:05	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:19	0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:19	0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	21:19	0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:00	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:00	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:00	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:09	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:09	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:09	0.8	5.05	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	S	23:20	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:20	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:20	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:29	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:29	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:29	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:39	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:39	0.8	4.30	0.0	0.0	465.1	0.0	465.1
06/24/75	B	23:39	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:43	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:43	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:43	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	04:55	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	04:55	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	04:55	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:05	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:05	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:05	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/25/75	S	05:15	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:15	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:15	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:28	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:28	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:28	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	13:48	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	13:48	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	13:48	0.3	5.05	0.0	0.0	0.0	0.0	0.0
07/01/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	M	13:58	0.3	4.30	0.0	0.0	232.6	0.0	232.6
07/01/75	B	13:58	0.3	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	14:09	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	14:09	0.3	4.30	0.0	0.0	465.1	0.0	465.1
07/01/75	B	14:09	0.3	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	14:18	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	14:18	0.3	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	14:18	0.3	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	14:30	0.3	5.40	0.0	0.0	185.2	0.0	185.2
07/01/75	M	14:30	0.3	4.30	0.0	0.0	697.7	0.0	697.7
07/01/75	B	14:30	0.3	5.05	0.0	0.0	396.0	0.0	396.0
07/01/75	S	19:32	0.5	5.40	0.0	0.0	185.2	0.0	185.2
07/01/75	M	19:32	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:32	0.5	5.05	0.0	0.0	396.0	0.0	396.0
07/01/75	S	19:44	0.5	5.40	0.0	0.0	185.2	0.0	185.2
07/01/75	M	19:44	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:44	0.5	5.05	0.0	198.0	198.0	0.0	396.0
07/01/75	S	19:54	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:54	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:54	0.5	5.05	0.0	0.0	396.0	0.0	396.0
07/01/75	S	20:04	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:04	0.5	4.30	0.0	0.0	232.6	0.0	232.6
07/01/75	B	20:04	0.5	5.05	0.0	0.0	396.0	0.0	396.0
07/01/75	S	20:13	0.5	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:13	0.5	4.30	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:13	0.5	5.05	0.0	0.0	198.0	0.0	198.0
07/01/75	S	23:22	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:22	0.1	4.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	B	23:22	0.1	5.00	0.0	0.0	5940.6	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	S	23:34	0.1	5.40	0.0	0.0	370.4	0.0	370.4
07/01/75	M	23:34	0.1	4.30	0.0	0.0	930.2	0.0	930.2
07/01/75	B	23:34	0.1	5.05	0.0	0.0	6336.6	0.0	6336.6
07/01/75	S	23:49	0.1	5.40	0.0	0.0	370.4	0.0	370.4
07/01/75	M	23:49	0.1	4.30	0.0	0.0	232.6	0.0	232.6
07/01/75	B	23:49	0.1	5.05	0.0	0.0	5940.6	0.0	5940.6
07/02/75	S	00:12	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:12	0.1	4.30	0.0	0.0	465.1	0.0	465.1
07/02/75	B	00:12	0.1	5.05	0.0	0.0	4752.5	0.0	4752.5
07/02/75	S	00:24	0.1	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:24	0.1	4.30	0.0	0.0	465.1	0.0	465.1
07/02/75	B	00:24	0.1	5.05	0.0	0.0	2970.3	396.0	3366.3
07/02/75	S	04:50	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	04:50	0.8	4.30	0.0	0.0	465.1	0.0	465.1
07/02/75	B	04:50	0.8	5.05	0.0	198.0	792.1	0.0	990.1
07/02/75	S	05:00	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:00	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:00	0.8	5.05	0.0	0.0	792.1	0.0	792.1
07/02/75	S	05:09	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:09	0.8	4.30	0.0	232.6	232.6	0.0	465.2
07/02/75	B	05:09	0.8	5.05	0.0	0.0	990.1	0.0	990.1
07/02/75	S	05:17	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:17	0.8	4.30	0.0	0.0	0.0	0.0	0.0
07/02/75	B	05:17	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/02/75	S	05:26	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/02/75	M	05:26	0.8	4.30	0.0	0.0	465.1	0.0	465.1
07/02/75	B	05:26	0.8	5.05	0.0	0.0	0.0	0.0	0.0
07/08/75	S	14:10	0.2	5.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/08/75	M	14:10	0.2	4.30	0.0	0.0	465.1	0.0	465.1
07/08/75	B	14:10	0.2	5.05	0.0	198.0	1980.2	0.0	2178.2
07/08/75	S	14:24	0.2	5.40	0.0	0.0	0.0	0.0	0.0
07/08/75	M	14:24	0.2	4.30	0.0	0.0	465.1	0.0	465.1
07/08/75	B	14:24	0.2	5.05	0.0	1188.1	1584.2	0.0	2772.3
07/08/75	S	14:35	0.2	5.40	0.0	185.2	370.4	0.0	555.6
07/08/75	M	14:35	0.2	4.30	0.0	465.1	3023.3	0.0	3488.4
07/08/75	B	14:35	0.2	5.05	0.0	1782.2	9108.9	0.0	10891.1
07/08/75	S	14:53	0.2	5.40	0.0	0.0	0.0	0.0	0.0
07/08/75	M	14:53	0.2	4.30	0.0	1627.9	7674.4	0.0	9302.3
07/08/75	B	14:53	0.2	5.05	0.0	1386.1	11287.	0.0	12673.2
07/08/75	S	15:05	0.2	5.40	0.0	0.0	0.0	0.0	0.0
07/08/75	M	15:05	0.2	4.30	0.0	232.6	12325.	0.0	12558.2
07/08/75	B	15:05	0.2	5.05	0.0	0.0	4950.5	0.0	4950.5
07/08/75	S	19:44	0.6	5.40	0.0	0.0	7592.6	0.0	7592.6
07/08/75	M	19:44	0.6	4.30	0.0	0.0	7907.0	0.0	7907.0
07/08/75	B	19:44	0.6	5.05	198.0	0.0	4554.5	0.0	4554.5
07/08/75	S	19:54	0.6	5.40	185.2	740.7	3703.7	0.0	4444.4
07/08/75	M	19:54	0.6	4.30	465.1	465.1	6046.5	0.0	6511.6
07/08/75	B	19:54	0.6	5.05	792.1	198.0	10297.	2178.2	12673.2
07/08/75	S	20:07	0.6	5.40	0.0	925.9	20925.	0.0	21851.8
07/08/75	M	20:07	0.6	4.30	465.1	0.0	36976.	0.0	36976.7
07/08/75	B	20:07	0.6	5.05	396.0	198.0	20792.	2376.2	23366.3
07/08/75	S	20:19	0.6	5.40	370.4	2222.2	6851.9	0.0	9074.1
07/08/75	M	20:19	0.6	4.30	232.6	465.1	30232.	0.0	30697.7
07/08/75	B	20:19	0.6	5.05	0.0	0.0	11485.	792.1	12277.2
07/08/75	S	20:30	0.6	5.40	78.4	185.2	6296.3	0.0	6481.5
07/08/75	M	20:30	0.6	4.30	2.6	232.6	23953.	0.0	24186.1

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/03/75	B	20:30	0.6	5.05	198.0	0.0	6534.7	396.0	6930.7
07/08/75	S	23:31	1.0	5.53	0.0	0.0	2895.9	0.0	2895.9
07/08/75	M	23:31	1.0	8.55	117.0	0.0	3625.7	117.0	3742.7
07/08/75	B	23:31	1.0	8.05	0.0	0.0	3850.9	621.1	4472.0
07/08/75	S	23:40	1.0	5.53	0.0	0.0	11945.	0.0	11945.7
07/08/75	M	23:40	1.0	8.55	0.0	0.0	2339.2	350.9	2690.1
07/08/75	B	23:40	1.0	8.05	0.0	0.0	2111.8	1118.0	3229.8
07/08/75	S	23:50	1.0	5.53	0.0	0.0	4705.9	0.0	4705.9
07/08/75	M	23:50	1.0	8.55	0.0	0.0	4444.4	0.0	4444.4
07/08/75	B	23:50	1.0	8.05	0.0	0.0	4596.3	1739.1	6335.4
07/09/75	S	24:00	1.0	5.53	0.0	0.0	6515.8	0.0	6515.8
07/09/75	M	24:00	1.0	8.55	0.0	0.0	11345.	0.0	11345.0
07/09/75	B	24:00	1.0	8.05	0.0	0.0	4347.8	1490.7	5838.5
07/09/75	S	00:12	1.0	5.53	0.0	0.0	2352.9	0.0	2352.9
07/09/75	M	00:12	1.0	8.55	0.0	0.0	7602.3	0.0	7602.3
07/09/75	B	00:12	1.0	8.05	0.0	0.0	8447.2	745.3	9192.5
07/09/75	S	04:54	-0.2	5.40	0.0	0.0	1296.3	0.0	1296.3
07/09/75	M	04:54	-0.2	4.30	232.6	0.0	9534.9	0.0	9534.9
07/09/75	B	04:54	-0.2	5.05	9505.	0.0	4752.5	990.1	5742.6
07/09/75	S	05:03	-0.2	5.40	0.0	0.0	1296.3	0.0	1296.3
07/09/75	M	05:03	-0.2	4.30	0.0	0.0	11627.	0.0	11627.9
07/09/75	B	05:03	-0.2	5.05	0.0	0.0	20000.	792.1	20792.1
07/09/75	S	05:12	-0.2	5.40	0.0	0.0	555.6	0.0	555.6
07/09/75	M	05:12	-0.2	4.30	0.0	232.6	12325.	0.0	12558.2
07/09/75	B	05:12	-0.2	5.05	******	0.0	20792.	198.0	20990.1
07/09/75	S	05:20	-0.2	5.40	0.0	0.0	555.6	0.0	555.6
07/09/75	M	05:20	-0.2	4.30	[illegible]2	0.0	10232.	0.0	10232.6
07/09/75	B	05:20	-0.2	5.05	[illegible]	0.0	11089.	0.0	11089.1

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/09/75	S	05:28	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
07/09/75	M	05:28	-0.2	4.30	2325.	0.0	0.0	7441.8	7441.8
07/09/75	B	05:28	-0.2	5.05	5148.	594.1	11287.	198.0	12079.2
07/15/75	S	11:25	-0.2	5.40	0.0	0.0	1851.9	0.0	1851.9
07/15/75	M	11:25	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
07/15/75	B	11:25	-0.2	5.05	0.0	0.0	11881.	0.0	11881.2
07/15/75	S	11:33	-0.2	5.40	0.0	0.0	2037.0	0.0	2037.0
07/15/75	M	11:33	-0.2	4.30	0.0	0.0	930.2	0.0	930.2
07/15/75	B	11:33	-0.2	5.05	0.0	198.0	19604.	0.0	19802.0
07/15/75	S	11:40	-0.2	5.40	0.0	0.0	555.6	0.0	555.6
07/15/75	M	11:40	-0.2	4.30	0.0	0.0	2790.7	0.0	2790.7
07/15/75	B	11:40	-0.2	5.05	0.0	396.0	14851.	0.0	15247.5
07/15/75	S	11:47	-0.2	5.40	0.0	0.0	1296.3	0.0	1296.3
07/15/75	M	11:47	-0.2	4.30	0.0	0.0	930.2	0.0	930.2
07/15/75	B	11:47	-0.2	5.05	0.0	0.0	12673.	0.0	12673.3
07/15/75	S	11:54	-0.2	5.40	0.0	185.2	2963.0	0.0	3148.2
07/15/75	M	11:54	-0.2	4.30	0.0	0.0	930.2	0.0	930.2
07/15/75	B	11:54	-0.2	5.05	0.0	0.0	11485.	0.0	11485.1
07/15/75	S	19:40	0.3	5.40	0.0	0.0	3333.3	0.0	3333.3
07/15/75	M	19:43	0.3	4.30	0.0	0.0	10000.	0.0	10000.0
07/15/75	B	19:40	0.3	5.05	0.0	0.0	4158.4	0.0	4158.4
07/15/75	S	19:51	0.3	5.40	0.0	0.0	1296.3	0.0	1296.3
07/15/75	M	19:51	0.3	4.30	0.0	0.0	3953.5	0.0	3953.5
07/15/75	B	19:51	0.3	5.05	0.0	0.0	6336.6	0.0	6336.6
07/15/75	S	20:05	0.3	5.40	0.0	0.0	555.6	0.0	555.6
07/15/75	M	20:05	0.3	4.30	0.0	0.0	10000.	0.0	10000.0
07/15/75	B	20:05	0.3	5.05	0.0	0.0	8316.8	198.0	8514.8
07/15/75	S	20:15	0.3	5.40	0.0	0.0	370.4	0.0	370.4

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/15/75	M	20:15	0.3	4.30	0.0	0.0	4651.2	0.0	4651.2
07/15/75	B	20:15	0.3	5.05	0.0	0.0	10891.	1584.2	12475.3
07/15/75	S	20:29	0.3	5.40	0.0	0.0	0.0	0.0	0.0
07/15/75	M	20:29	0.3	4.30	0.0	0.0	4418.6	0.0	4418.6
07/15/75	B	20:29	0.3	5.05	0.0	198.0	14495.	594.1	15247.5
07/15/75	S	23:52	-0.2	5.40	0.0	0.0	1296.3	0.0	1296.3
07/15/75	M	23:52	-0.2	4.30	0.0	0.0	3255.8	0.0	3255.8
07/15/75	B	23:52	-0.2	5.05	0.0	0.0	10495.	0.0	10495.0
07/16/75	S	00:01	-0.2	5.40	0.0	0.0	2407.4	0.0	2407.4
07/16/75	M	00:01	-0.2	4.30	0.0	0.0	1395.3	0.0	1395.3
07/16/75	B	00:01	-0.2	5.05	0.0	0.0	9505.0	0.0	9505.0
07/16/75	S	00:11	-0.2	5.40	0.0	0.0	3888.9	0.0	3888.9
07/16/75	M	00:11	-0.2	4.30	0.0	0.0	5348.8	0.0	5348.8
07/16/75	B	00:11	-0.2	5.05	0.0	0.0	7326.7	198.0	7524.7
07/16/75	S	00:20	-0.2	5.40	0.0	0.0	14074.	0.0	14074.1
07/16/75	M	00:20	-0.2	4.30	0.0	0.0	9302.3	0.0	9302.3
07/16/75	B	00:20	-0.2	5.05	0.0	0.0	10495.	0.0	10495.0
07/16/75	S	00:30	-0.2	5.40	0.0	0.0	9814.8	0.0	9814.8
07/16/75	M	00:30	-0.2	4.30	0.0	0.0	5814.0	0.0	5814.0
07/16/75	B	00:30	-0.2	5.05	0.0	0.0	10891.	0.0	10891.1
07/16/75	S	05:08	0.8	5.40	0.0	0.0	370.4	0.0	370.4
07/16/75	M	05:06	0.8	4.30	0.0	0.0	6744.2	0.0	6744.2
07/16/75	B	05:08	0.8	5.05	0.0	0.0	3366.3	198.0	3564.3
07/16/75	S	05:20	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/16/75	M	05:20	0.8	4.30	0.0	0.0	0.0	6046.5	6046.5
07/16/75	B	05:20	0.8	5.05	0.0	0.0	4158.4	0.0	4158.4
07/16/75	S	05:29	0.8	5.40	0.0	185.2	185.2	0.0	370.4
07/16/75	M	05:29	0.8	4.30	0.0	0.0	6976.7	0.0	6976.7

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/16/75	B	05:29	0.8	5.05	0.0	0.0	5544.6	0.0	5544.6
07/16/75	S	05:41	0.8	5.40	0.0	0.0	0.0	0.0	0.0
07/16/75	M	05:41	0.8	4.30	0.0	0.0	13488.	0.0	13488.4
07/16/75	B	05:41	0.8	5.05	0.0	0.0	6138.6	0.0	6138.6
07/16/75	S	05:51	0.8	5.40	0.0	0.0	185.2	0.0	185.2
07/16/75	M	05:51	0.8	4.30	0.0	0.0	3023.3	0.0	3023.3
07/16/75	B	05:51	0.8	5.05	0.0	0.0	3960.4	0.0	3960.4
07/22/75	S	12:15	0.7	45.30	0.0	0.0	0.0	0.0	0.0
07/22/75	M	12:15	0.7	44.70	0.0	0.0	22.4	0.0	22.4
07/22/75	B	12:15	0.7	43.80	0.0	0.0	22.8	0.0	22.8
07/22/75	S	12:52	0.7	45.30	0.0	22.1	22.1	0.0	44.2
07/22/75	M	12:52	0.7	44.70	0.0	0.0	22.4	0.0	22.4
07/22/75	B	12:52	0.7	43.80	0.0	0.0	251.1	0.0	251.1
07/22/75	S	20:00	0.5	32.40	0.0	0.0	0.0	0.0	0.0
07/22/75	M	20:00	0.5	25.80	0.0	0.0	5116.3	0.0	5116.3
07/22/75	B	20:00	0.5	30.30	0.0	0.0	2805.3	66.0	2871.3
07/22/75	S	20:36	0.5	32.40	0.0	0.0	92.6	0.0	92.6
07/22/75	M	20:36	0.5	25.80	0.0	0.0	4418.6	0.0	4418.6
07/22/75	B	20:36	0.5	30.30	0.0	0.0	2046.2	99.0	2145.2
07/23/75	S	00:00	0.9	45.30	0.0	0.0	66.2	0.0	66.2
07/23/75	M	00:00	0.9	44.70	0.0	0.0	1789.7	22.4	1812.1
07/23/75	B	00:00	0.9	43.80	0.0	0.0	1461.2	251.1	1712.3
07/23/75	S	00:38	0.9	45.30	0.0	0.0	110.4	0.0	110.4
07/23/75	M	00:38	0.9	44.70	0.0	0.0	1252.8	0.0	1252.8
07/23/75	B	00:38	0.9	43.80	0.0	0.0	913.2	22.8	936.0
07/23/75	S	04:40	-0.1	45.30	0.0	0.0	0.0	0.0	0.0
07/23/75	M	04:40	-0.1	44.70	0.0	0.0	1633.1	0.0	1633.1
07/23/75	B	04:40	-0.1	43.80	0.0	0.0	1073.1	45.7	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/23/75	S	05:17	-0.1	45.30	0.0	0.0	0.0	0.0	0.0
07/23/75	M	05:17	-0.1	44.70	0.0	0.0	648.8	0.0	648.8
07/23/75	B	05:17	-0.1	43.80	0.0	0.0	730.5	22.8	753.4
07/29/75	S	11:47	0.2	45.30	0.0	0.0	0.0	0.0	0.0
07/29/75	M	11:47	0.2	44.70	0.0	0.0	0.0	0.0	0.0
07/29/75	B	11:47	0.2	43.80	0.0	0.0	0.0	0.0	0.0
07/29/75	S	12:23	0.2	45.30	0.0	0.0	0.0	0.0	0.0
07/29/75	M	12:23	0.2	44.70	0.0	0.0	0.0	0.0	0.0
07/29/75	B	12:23	0.2	43.80	0.0	0.0	22.8	0.0	22.8
07/29/75	S	20:00	0.0	45.30	0.0	0.0	0.0	0.0	0.0
07/29/75	M	20:00	0.0	44.70	0.0	0.0	22.4	0.0	22.4
07/29/75	B	20:00	0.0	43.80	0.0	0.0	799.1	91.3	890.4
07/29/75	S	20:33	0.0	45.30	0.0	0.0	0.0	0.0	0.0
07/29/75	M	20:33	0.0	44.70	0.0	0.0	2214.8	89.5	2304.3
07/29/75	B	20:33	0.0	43.80	0.0	0.0	2762.6	821.9	3584.5
07/29/75	S	23:30	0.2	45.30	0.0	0.0	0.0	0.0	0.0
07/29/75	M	23:30	0.2	44.70	0.0	0.0	581.7	0.0	581.7
07/29/75	B	23:30	0.2	43.80	0.0	0.0	205.5	91.3	296.8
07/30/75	S	00:10	0.2	45.30	0.0	0.0	0.0	0.0	0.0
07/30/75	M	00:10	0.2	44.70	0.0	0.0	447.4	0.0	447.4
07/30/75	B	00:10	0.2	43.80	0.0	0.0	639.3	251.1	890.4
07/30/75	S	04:30	0.5	45.30	0.0	0.0	0.0	0.0	0.0
07/30/75	M	04:30	0.5	44.70	0.0	0.0	223.7	44.7	268.4
07/30/75	B	04:30	0.5	43.80	0.0	0.0	251.1	91.3	342.4
07/30/75	S	05:05	0.5	45.30	0.0	0.0	0.0	0.0	0.0
07/30/75	M	05:05	0.5	44.70	0.0	0.0	290.8	67.1	357.9
07/30/75	B	05:05	0.5	[illegible]	0.0	0.0	45.7	22.8	68.5
08/05/75	S	14:02	-0.2	[illegible]	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/05/75	M	14:02	-0.2	44.70	0.0	0.0	179.0	0.0	179.0
08/05/75	B	14:02	-0.2	43.80	0.0	0.0	730.6	0.0	730.6
08/05/75	S	14:52	-0.2	45.30	0.0	0.0	44.2	0.0	44.2
08/05/75	M	14:52	-0.2	44.70	0.0	0.0	201.3	0.0	201.3
08/05/75	B	14:52	-0.2	43.80	0.0	0.0	388.1	0.0	388.1
08/05/75	S	20:00	0.9	45.30	0.0	0.0	0.0	0.0	0.0
08/05/75	M	20:00	0.9	44.70	0.0	0.0	1118.6	0.0	1118.6
08/05/75	B	20:00	0.9	43.80	0.0	0.0	1758.0	456.6	2214.6
08/05/75	S	20:35	0.9	45.30	0.0	0.0	176.6	0.0	176.6
08/05/75	M	20:35	0.9	44.70	0.0	0.0	4608.5	44.7	4653.2
08/05/75	B	20:35	0.9	43.80	0.0	0.0	3242.0	1849.3	5091.3
08/06/75	S	23:40	0.8	45.30	0.0	0.0	44.2	0.0	44.2
08/06/75	M	23:40	0.8	44.70	0.0	0.0	2259.5	89.5	2349.0
08/05/75	B	23:40	0.8	43.80	0.0	0.0	2100.5	1004.6	3105.1
08/06/75	S	00:15	0.8	45.30	0.0	0.0	198.7	0.0	198.7
08/06/75	M	00:15	0.8	44.70	0.0	0.0	872.5	22.4	894.9
08/06/75	B	00:15	0.8	43.80	0.0	0.0	730.6	22.8	753.4
08/06/75	S	04:33	-0.3	45.30	0.0	0.0	22.1	0.0	22.1
08/06/75	M	04:33	-0.3	44.70	0.0	0.0	1006.7	0.0	1006.7
08/06/75	B	04:33	-0.3	43.80	0.0	0.0	2511.4	958.9	3470.3
08/06/75	S	05:10	-0.3	45.30	0.0	0.0	44.2	0.0	44.2
08/06/75	M	05:10	-0.3	44.70	0.0	0.0	2080.5	0.0	2080.5
08/06/75	B	05:10	-0.3	43.80	0.0	0.0	2808.2	45.7	2853.9
08/12/75	S	12:04	0.5	45.30	0.0	0.0	0.0	0.0	0.0
08/12/75	M	12:04	0.5	44.70	0.0	0.0	179.0	0.0	179.0
08/12/75	B	12:04	0.5	43.80	0.0	0.0	22.8	0.0	22.8
08/12/75	S	12:40	0.5	45.30	0.0	0.0	0.0	0.0	0.0
08/12/75	M	12:40	0.5	44.70	0.0	0.0	134.2	0.0	134.2

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/12/75	B	12:40	0.5	43.60	0.0	0.0	0.0	0.0	0.0
08/12/75	S	20:50	0.2	45.30	0.0	0.0	44.2	0.0	44.2
08/12/75	M	20:50	0.2	44.70	0.0	0.0	805.4	0.0	805.4
08/12/75	B	20:50	0.2	43.60	0.0	0.0	1415.5	0.0	1415.5
08/12/75	S	21:27	0.2	45.30	0.0	0.0	0.0	0.0	0.0
08/12/75	M	21:27	0.2	44.70	0.0	0.0	984.3	0.0	984.3
08/12/75	B	21:27	0.2	43.60	0.0	0.0	1392.7	91.3	1484.0
08/12/75	S	23:35	0.2	45.30	0.0	0.0	0.0	0.0	0.0
08/12/75	M	23:35	0.2	44.70	0.0	0.0	1275.2	0.0	1275.2
08/12/75	B	23:35	0.2	43.60	0.0	0.0	593.6	45.7	639.3
08/13/75	S	00:12	0.2	45.30	0.0	0.0	66.2	0.0	66.2
08/13/75	M	00:12	0.2	44.70	0.0	0.0	894.9	0.0	894.9
08/13/75	B	00:12	0.2	43.60	0.0	0.0	616.4	22.8	639.2
08/13/75	S	04:21	0.9	45.30	0.0	0.0	22.1	0.0	22.1
08/13/75	M	04:21	0.9	44.70	0.0	0.0	447.4	0.0	447.4
08/13/75	B	04:21	0.9	43.60	0.0	0.0	159.8	0.0	159.8
08/13/75	S	04:55	0.9	45.30	0.0	0.0	22.1	22.1	44.2
08/13/75	M	04:55	0.9	44.70	0.0	0.0	425.1	0.0	425.1
08/13/75	B	04:55	0.9	43.60	0.0	0.0	319.6	0.0	319.6
08/19/75	S	11:57	0.4	45.30	0.0	0.0	0.0	0.0	0.0
08/19/75	M	11:57	0.4	44.70	0.0	0.0	0.0	0.0	0.0
08/19/75	B	11:57	0.4	43.60	0.0	0.0	0.0	0.0	0.0
08/19/75	S	12:34	0.4	45.30	0.0	0.0	0.0	0.0	0.0
08/19/75	M	12:34	0.4	44.70	0.0	0.0	0.0	0.0	0.0
08/19/75	B	12:34	0.4	43.60	0.0	0.0	0.0	0.0	0.0
08/19/75	S	20:00	0.7	45.30	0.0	0.0	22.1	0.0	22.1
08/19/75	M	20:00	0.7	44.70	0.0	0.0	335.6	0.0	335.6
08/19/75	B	20:00	0.7	43.60	0.0	0.0	137.0	0.0	137.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/19/75	S	20:39	0.7	45.30	0.0	0.0	0.0	0.0	0.0
08/19/75	M	20:39	0.7	44.70	0.0	0.0	402.7	0.0	402.7
08/19/75	B	20:39	0.7	43.80	0.0	0.0	159.8	0.0	159.8
08/19/75	S	23:30	0.7	45.30	0.0	0.0	44.2	0.0	44.2
08/19/75	M	23:30	0.7	44.70	0.0	0.0	223.7	0.0	223.7
08/19/75	B	23:30	0.7	43.80	0.0	0.0	68.5	0.0	68.5
08/20/75	S	00:11	0.7	45.30	0.0	0.0	0.0	0.0	0.0
08/20/75	M	00:11	0.7	44.70	0.0	0.0	469.8	0.0	469.8
08/20/75	B	00:11	0.7	43.80	0.0	0.0	22.8	0.0	22.8
08/20/75	S	04:50	-0.3	45.30	0.0	0.0	22.1	0.0	22.1
08/20/75	M	04:50	-0.3	44.70	0.0	0.0	111.9	0.0	111.9
08/20/75	B	04:50	-0.3	43.80	0.0	0.0	68.5	0.0	68.5
08/20/75	S	05:25	-0.3	32.40	0.0	0.0	0.0	0.0	0.0
08/20/75	M	05:25	-0.3	44.70	0.0	0.0	134.2	0.0	134.2
08/20/75	B	05:25	-0.3	43.80	0.0	0.0	274.0	0.0	274.0
08/26/75	S	12:00	0.7	45.30	0.0	0.0	0.0	0.0	0.0
08/26/75	M	12:00	0.7	44.70	0.0	0.0	0.0	0.0	0.0
08/26/75	B	12:00	0.7	43.80	0.0	0.0	0.0	0.0	0.0
08/26/75	S	12:35	0.7	45.30	0.0	0.0	0.0	0.0	0.0
08/26/75	M	12:35	0.7	44.70	0.0	0.0	0.0	0.0	0.0
08/26/75	B	12:35	0.7	43.80	0.0	0.0	0.0	0.0	0.0
08/26/75	S	20:00	-0.1	45.30	0.0	0.0	0.0	0.0	0.0
08/26/75	M	20:00	-0.1	44.70	0.0	0.0	67.1	0.0	67.1
08/26/75	B	20:00	-0.1	43.80	0.0	0.0	433.8	251.1	684.9
08/26/75	S	20:35	-0.1	45.30	0.0	0.0	0.0	0.0	0.0
08/26/75	M	20:35	-0.1	44.70	0.0	0.0	223.7	0.0	223.7
08/26/75	B	20:35	-0.1	43.80	0.0	0.0	342.5	68.5	411.0
08/26/75	S	23:30	0.3	45.30	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/26/75	M	23:30	0.3	44.70	0.0	0.0	111.9	0.0	111.9
08/26/75	B	23:30	0.3	43.80	0.0	0.0	525.1	137.0	662.1
08/27/75	S	00:10	0.3	45.30	0.0	0.0	0.0	0.0	0.0
08/27/75	M	00:10	0.3	44.70	0.0	0.0	335.6	0.0	335.6
08/27/75	B	00:10	0.3	43.80	0.0	0.0	411.0	159.8	570.8
08/27/75	S	04:56	0.3	45.30	0.0	0.0	0.0	0.0	0.0
08/27/75	M	04:56	0.3	44.70	0.0	0.0	44.7	0.0	44.7
08/27/75	B	04:56	0.3	43.80	0.0	0.0	45.7	22.8	68.5
08/27/75	S	05:30	0.3	45.30	0.0	0.0	0.0	0.0	0.0
08/27/75	M	05:30	0.3	44.70	0.0	0.0	22.4	22.4	44.8
08/27/75	B	05:30	0.3	43.80	0.0	0.0	525.1	22.8	547.9
09/10/75	S	19:42	-0.2	45.30	0.0	0.0	0.0	0.0	0.0
09/10/75	M	19:42	-0.2	44.70	0.0	0.0	0.0	0.0	0.0
09/10/75	B	19:42	-0.2	43.80	0.0	0.0	159.8	137.0	296.8
09/10/75	S	20:15	-0.3	45.30	0.0	0.0	0.0	0.0	0.0
09/10/75	M	20:15	-0.3	44.70	0.0	0.0	22.4	0.0	22.4
09/10/75	B	20:15	-0.3	43.80	0.0	0.0	159.8	68.5	228.3
09/17/75	S	19:05	0.5	45.30	0.0	0.0	0.0	0.0	0.0
09/17/75	M	19:05	0.5	44.70	0.0	0.0	22.4	0.0	22.4
09/17/75	B	19:05	0.5	43.80	0.0	0.0	114.2	91.3	205.5
09/17/75	S	19:40	0.6	45.30	0.0	0.0	0.0	0.0	0.0
09/17/75	M	19:40	0.6	44.70	0.0	0.0	44.7	0.0	44.7
09/17/75	B	19:40	0.6	43.80	0.0	0.0	251.1	45.7	296.8
09/24/75	S	18:36	0.0	45.30	0.0	0.0	0.0	0.0	0.0
09/24/75	M	18:36	0.0	44.70	0.0	0.0	44.7	0.0	44.7
09/24/75	B	18:36	0.0	43.80	0.0	0.0	45.7	22.8	68.5
09/24/75	S	19:14	-0.1	45.20	0.0	0.0	0.0	0.0	0.0
09/24/75	M	19:14	-0.1	44.70	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
09/24/75	B	19:14	-0.1	43.80	0.0	0.0	91.3	0.0	91.3
10/01/75	S	18:30	0.9	45.30	0.0	0.0	0.0	0.0	0.0
10/01/75	M	18:30	0.9	44.70	0.0	0.0	0.0	0.0	0.0
10/01/75	B	18:30	0.9	43.80	0.0	0.0	0.0	0.0	0.0
10/01/75	S	19:08	1.1	43.80	0.0	0.0	0.0	0.0	0.0
10/01/75	M	19:08	1.1	35.40	0.0	0.0	0.0	0.0	0.0
10/01/75	B	19:08	1.1	41.10	0.0	0.0	0.0	0.0	0.0
10/08/75	S	18:15	0.0	21.00	0.0	0.0	0.0	0.0	0.0
10/08/75	M	18:15	0.0	15.00	0.0	0.0	0.0	0.0	0.0
10/08/75	B	18:15	0.0	18.60	0.0	0.0	0.0	0.0	0.0
10/08/75	S	18:55	-0.2	21.00	0.0	0.0	0.0	0.0	0.0
10/08/75	M	18:55	-0.2	15.00	0.0	0.0	0.0	0.0	0.0
10/08/75	B	18:55	-0.2	18.60	0.0	0.0	0.0	0.0	0.0
99/99/99		AT:60	-0.2	18.60	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
03/11/75	S	11:30	0.7	97.20	0.0	30.9	0.0	0.0	30.9
03/11/75	M	11:30	0.7	77.40	0.0	25.8	12.9	0.0	38.7
03/11/75	B	11:30	0.7	90.90	0.0	77.0	99.0	0.0	176.0
03/11/75	S	18:00	-0.2	97.20	0.0	30.9	82.3	0.0	113.2
03/11/75	M	18:00	-0.2	77.40	0.0	193.8	129.2	0.0	323.0
03/11/75	B	18:00	-0.2	90.90	0.0	110.0	253.0	0.0	363.0
03/11/75	S	23:30	0.8	97.20	0.0	41.2	20.6	0.0	61.8
03/11/75	M	23:30	0.8	77.40	0.0	38.8	129.2	0.0	168.0
03/11/75	B	23:30	0.8	90.90	0.0	143.0	187.0	0.0	330.0
03/12/75	S	06:30	-0.2	97.20	0.0	133.7	174.9	0.0	308.6
03/12/75	M	06:30	-0.2	77.40	0.0	284.2	361.8	0.0	646.0
03/12/75	B	06:30	-0.2	90.90	0.0	88.0	88.0	0.0	176.0
03/18/75	S	12:00	0.4	97.20	0.0	0.0	0.0	0.0	0.0
03/18/75	M	12:00	0.4	77.40	0.0	116.3	12.9	0.0	129.2
03/18/75	B	12:00	0.4	90.90	0.0	231.0	539.1	0.0	770.1
03/18/75	S	18:30	0.2	90.90	0.0	22.0	88.0	0.0	110.0
03/18/75	M	18:30	0.2	77.40	0.0	25.9	219.6	0.0	245.4
03/18/75	B	18:30	0.2	90.90	0.0	22.0	330.0	0.0	352.0
03/18/75	S	24:00	0.5	97.20	0.0	10.3	133.7	0.0	144.0
03/18/75	M	24:00	0.5	77.40	0.0	90.4	335.9	0.0	426.3
03/18/75	B	24:00	0.5	90.90	0.0	33.0	176.0	0.0	209.0
03/19/75	S	07:00	0.2	97.20	0.0	10.3	10.3	0.0	20.6
03/19/75	M	07:00	0.2	77.40	0.0	64.6	206.7	0.0	271.3
03/19/75	B	07:00	0.2	90.90	0.0	77.0	737.1	0.0	814.1
03/25/75	S	19:00	0.3	97.20	0.0	0.0	82.3	0.0	82.3
03/25/75	M	19:00	0.3	77.40	0.0	0.0	103.4	0.0	103.4
03/25/75	B	19:00	0.3	90.90	0.0	0.0	66.0	0.0	66.0
03/26/75	S	00:30	0.5	97.20	0.0	0.0	61.7	0.0	61.7

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
03/26/75	M	00:30	0.5	77.40	0.0	129.2	12.9	0.0	142.1
03/26/75	B	00:30	0.5	90.90	0.0	11.0	22.0	0.0	33.0
03/26/75	S	06:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
03/26/75	M	06:30	0.8	77.40	0.0	51.7	12.9	0.0	64.6
03/26/75	B	06:30	0.8	90.90	0.0	11.0	0.0	0.0	11.0
03/26/75	S	12:30	0.0	97.20	0.0	0.0	51.4	0.0	51.4
03/26/75	M	12:30	0.0	77.40	0.0	0.0	25.8	0.0	25.8
03/26/75	B	12:30	0.0	90.90	0.0	0.0	33.0	0.0	33.0
03/28/75	S	12:30	0.6	97.20	0.0	0.0	41.2	0.0	41.2
03/28/75	M	12:30	0.6	77.40	0.0	12.9	51.7	0.0	64.6
03/28/75	B	12:30	0.6	90.90	0.0	0.0	44.0	0.0	44.0
04/01/75	S	12:30	0.2	97.20	0.0	0.0	10.3	0.0	10.3
04/01/75	M	12:30	0.2	77.40	0.0	0.0	25.8	0.0	25.8
04/01/75	B	12:30	0.2	90.90	0.0	11.0	44.0	0.0	55.0
04/01/75	S	19:30	-0.2	97.20	0.0	0.0	10.3	0.0	10.3
04/01/75	M	19:30	-0.2	77.40	0.0	0.0	25.8	0.0	25.8
04/01/75	B	19:30	-0.2	90.90	0.0	0.0	11.0	0.0	11.0
04/02/75	S	00:30	0.2	97.20	0.0	0.0	10.3	0.0	10.3
04/02/75	M	00:30	0.2	77.40	0.0	0.0	25.8	0.0	25.8
04/02/75	B	00:30	0.2	90.90	0.0	0.0	33.0	0.0	33.0
04/02/75	S	06:00	0.4	97.20	0.0	0.0	10.3	0.0	10.3
04/02/75	M	06:00	0.4	77.40	568.5	0.0	51.7	0.0	51.7
04/02/75	B	06:00	0.4	90.90	0.0	11.0	44.0	0.0	55.0
04/08/75	S	12:33	0.2	97.20	0.0	0.0	10.3	0.0	10.3
04/08/75	M	12:30	0.2	77.40	0.0	0.0	38.8	0.0	38.8
04/08/75	B	12:30	0.2	90.90	0.0	0.0	77.0	22.0	99.0
04/08/75	S	19:30	0.5	97.20	0.0	0.0	30.9	0.0	30.9
04/08/75	M	19:30	0.5	77.40	0.0	0.0	12.9	0.0	12.9

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/08/75	B	19:30	0.5	90.90	0.0	0.0	22.0	0.0	22.0
04/09/75	S	00:30	0.2	97.20	0.0	0.0	0.0	0.0	0.0
04/09/75	M	00:30	0.2	77.40	0.0	0.0	25.8	0.0	25.8
04/09/75	B	00:30	0.2	90.90	0.0	0.0	132.0	0.0	132.0
04/09/75	S	06:00	0.0	97.20	0.0	0.0	20.6	0.0	20.6
04/09/75	M	06:00	0.0	77.40	0.0	0.0	116.3	0.0	116.3
04/09/75	B	06:00	0.0	90.90	0.0	0.0	154.0	0.0	154.0
04/15/75	S	12:30	0.5	97.20	0.0	0.0	0.0	0.0	0.0
04/15/75	M	12:30	0.5	77.40	0.0	0.0	142.1	0.0	142.1
04/15/75	B	12:30	0.5	90.90	0.0	0.0	154.0	0.0	154.0
04/15/75	S	19:30	0.5	97.20	0.0	0.0	41.2	0.0	41.2
04/15/75	M	19:30	0.5	77.40	0.0	0.0	284.2	0.0	284.2
04/15/75	B	19:30	0.5	90.90	0.0	0.0	451.0	44.0	495.0
04/16/75	S	00:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
04/16/75	M	00:30	0.8	77.40	0.0	0.0	478.0	12.9	490.9
04/16/75	B	00:30	0.8	90.90	0.0	0.0	209.0	11.0	220.0
04/16/75	S	06:00	0.1	97.20	0.0	0.0	0.0	0.0	0.0
04/16/75	M	06:00	0.1	77.40	0.0	0.0	361.8	0.0	361.8
04/16/75	B	06:00	0.1	90.90	0.0	0.0	462.0	11.0	473.0
04/22/75	S	12:30	-0.2	97.20	0.0	0.0	10.3	0.0	10.3
04/22/75	M	12:30	-0.2	77.40	0.0	0.0	12.9	0.0	12.9
04/22/75	B	12:30	-0.2	90.90	0.0	0.0	0.0	0.0	0.0
04/22/75	S	19:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
04/22/75	M	19:30	0.8	77.40	0.0	0.0	0.0	0.0	0.0
04/22/75	B	19:30	0.8	90.90	0.0	0.0	0.0	0.0	0.0
04/23/75	S	00:30	0.2	97.20	0.0	0.0	0.0	0.0	0.0
04/23/75	M	00:30	0.2	77.40	0.0	0.0	12.9	25.8	38.7
04/23/75	B	00:30	0.2	90.90	0.0	0.0	0.0	11.0	11.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/23/75	S	05:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
04/23/75	M	05:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
04/23/75	B	05:30	0.0	90.90	0.0	0.0	11.0	0.0	11.0
04/29/75	S	12:30	0.7	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	12:30	0.7	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	12:30	0.7	90.90	0.0	0.0	0.0	0.0	0.0
04/29/75	S	20:00	-0.2	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	20:00	-0.2	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	20:00	-0.2	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	00:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
04/30/75	M	00:30	0.8	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	00:30	0.8	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:30	0.4	97.20	0.0	0.0	0.0	0.0	0.0
04/30/75	M	05:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:30	0.2	97.20	0.0	0.0	0.0	0.0	0.0
05/06/75	M	12:30	0.2	77.40	0.0	0.0	0.0	0.0	0.0
05/06/75	B	12:30	0.2	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	20:00	1.0	99.45	0.0	0.0	0.0	0.0	0.0
05/06/75	M	20:00	1.0	153.90	0.0	0.0	0.0	0.0	0.0
05/06/75	B	20:00	1.0	144.90	0.0	0.0	0.0	0.0	0.0
05/07/75	S	00:30	0.4	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	00:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	00:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/07/75	S	15:18	0.5	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	15:18	0.5	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	15:18	0.5	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	12:30	-0.3	97.20	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/22/75	S	05:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
04/22/75	M	05:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
04/22/75	B	05:30	0.0	90.90	0.0	0.0	0.0	0.0	0.0
04/29/75	S	12:30	0.7	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	12:30	0.7	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	12:30	0.7	90.90	0.0	0.0	0.0	0.0	0.0
04/29/75	S	20:00	-0.2	97.20	0.0	0.0	0.0	0.0	0.0
04/29/75	M	20:00	-0.2	77.40	0.0	0.0	0.0	0.0	0.0
04/29/75	B	20:00	-0.2	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	00:30	0.8	97.20	0.0	0.0	0.0	0.0	0.0
04/30/75	M	00:30	0.8	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	00:30	0.8	90.90	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:30	0.4	97.20	0.0	0.0	10.3	0.0	10.3
04/30/75	M	05:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:30	0.2	97.20	0.0	0.0	10.3	0.0	10.3
05/06/75	M	12:30	0.2	77.40	0.0	0.0	0.0	0.0	0.0
05/06/75	B	12:30	0.2	90.90	0.0	0.0	0.0	0.0	0.0
05/06/75	S	20:00	1.0	99.45	0.0	0.0	20.1	0.0	20.1
05/06/75	M	20:00	1.0	153.90	0.0	0.0	6.5	0.0	6.5
05/06/75	B	20:00	1.0	144.90	0.0	0.0	6.9	0.0	6.9
05/07/75	S	00:30	0.4	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	00:30	0.4	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	00:30	0.4	90.90	0.0	0.0	0.0	0.0	0.0
05/07/75	S	15:18	0.5	97.20	0.0	0.0	0.0	0.0	0.0
05/07/75	M	15:18	0.5	77.40	0.0	0.0	0.0	0.0	0.0
05/07/75	B	15:18	0.5	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	12:30	-0.3	97.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/03/75	M	12:30	-0.3	77.40	0.0	0.0	0.0	0.0	0.0
06/03/75	B	12:30	-0.3	90.90	0.0	0.0	0.0	0.0	0.0
06/03/75	S	20:30	0.6	97.20	0.0	0.0	0.0	0.0	0.0
06/03/75	M	20:30	0.6	77.40	0.0	0.0	0.0	0.0	0.0
06/03/75	B	20:30	0.6	90.90	0.0	0.0	0.0	0.0	0.0
06/04/75	S	00:30	0.0	97.20	0.0	0.0	0.0	0.0	0.0
06/04/75	M	00:30	0.0	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	B	00:30	0.0	90.90	0.0	0.0	11.0	0.0	11.0
06/04/75	S	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	M	04:30	0.5	77.40	0.0	0.0	0.0	0.0	0.0
06/04/75	B	04:30	0.5	90.90	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:27	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:27	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:27	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:39	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	13:39	0.6	4.30	0.0	0.0	232.5	0.0	232.6
06/10/75	B	13:39	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	13:50	0.6	5.40	0.0	0.0	185.2	0.0	185.2
06/10/75	M	13:50	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	13:50	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:01	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:01	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:01	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	14:12	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	14:12	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	14:12	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:22	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:22	0.3	4.30	0.0	0.0	232.6	0.0	232.6

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	B	20:22	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:41	0.3	5.40	0.0	0.0	185.2	0.0	185.2
06/10/75	M	20:41	0.3	4.30	0.0	0.0	232.6	0.0	232.6
06/10/75	B	20:41	0.3	5.05	0.0	0.0	198.0	0.0	198.0
06/10/75	S	20:54	0.3	5.40	0.0	0.0	370.4	0.0	370.4
06/10/75	M	20:54	0.3	4.30	0.0	0.0	930.2	0.0	930.2
06/10/75	B	20:54	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	21:10	0.3	5.40	0.0	0.0	185.2	0.0	185.2
06/10/75	M	21:10	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/10/75	B	21:10	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/10/75	S	21:27	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/10/75	M	21:27	0.3	4.30	0.0	0.0	232.6	0.0	232.6
06/10/75	B	21:27	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:07	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:07	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:07	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:19	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:19	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:19	0.9	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:31	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:31	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:31	0.9	5.05	0.0	0.0	594.1	0.0	594.1
06/11/75	S	00:43	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:43	0.9	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	00:43	0.9	5.05	0.0	0.0	396.0	0.0	396.0
06/11/75	S	00:58	0.9	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:58	0.9	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	00:58	0.9	5.05	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	S	05:00	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:00	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:00	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:17	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:17	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:32	-0.2	5.40	0.0	0.0	185.2	0.0	185.2
06/11/75	M	05:32	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:32	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:46	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:46	-0.2	4.30	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:46	-0.2	5.05	0.0	0.0	0.0	0.0	0.0
06/11/75	S	06:02	-0.2	5.40	0.0	0.0	0.0	0.0	0.0
06/11/75	M	06:02	-0.2	4.30	0.0	0.0	232.6	0.0	232.6
06/11/75	B	06:02	-0.2	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	13:58	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:58	0.8	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	13:58	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:10	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:10	0.8	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	14:10	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:21	0.8	5.40	0.0	0.0	185.2	0.0	185.2
06/17/75	M	14:21	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:21	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:32	0.8	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	14:32	0.8	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	14:32	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	14:41	0.8	5.40	0.0	0.0	185.2	0.0	185.2

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	14:41	0.8	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	14:41	0.8	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	19:51	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	19:51	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	19:51	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:02	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:02	0.6	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	20:02	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:15	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:15	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:15	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	20:25	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:25	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:25	0.6	5.05	0.0	0.0	198.0	0.0	198.0
06/17/75	S	20:36	0.6	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	20:36	0.6	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	20:36	0.6	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	23:27	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	23:27	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/17/75	B	23:27	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/17/75	S	23:44	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/17/75	M	23:44	0.1	4.30	0.0	0.0	232.6	0.0	232.6
06/17/75	B	23:44	0.1	5.05	0.0	0.0	396.0	0.0	396.0
06/18/75	S	00:03	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:03	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:03	0.1	5.05	0.0	0.0	198.0	0.0	198.0
06/18/75	S	00:14	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:14	0.1	4.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

HERRING DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	00:14	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	00:29	0.1	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	00:29	0.1	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	00:29	0.1	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	03:50	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	03:50	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	03:50	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:04	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:04	0.5	4.30	0.0	0.0	232.6	0.0	232.6
06/18/75	B	04:04	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:15	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	04:15	0.5	4.30	0.0	0.0	232.6	0.0	232.6
06/18/75	B	04:15	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	04:27	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:27	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:27	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/18/75	S	14:38	0.5	5.40	0.0	0.0	0.0	0.0	0.0
06/18/75	M	14:38	0.5	4.30	0.0	0.0	0.0	0.0	0.0
06/18/75	B	14:38	0.5	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:44	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:44	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:44	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:58	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:58	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:58	0.3	5.05	0.0	0.0	0.0	0.0	0.0
06/24/75	S	14:14	0.3	5.40	0.0	0.0	0.0	0.0	0.0
06/24/75	M	14:14	0.3	4.30	0.0	0.0	0.0	0.0	0.0
06/24/75	B	14:14	0.3	5.05	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

3.2 LOVETT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1975

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/22/75	S	05:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
04/22/75	M	05:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
04/22/75	B	05:00	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
04/29/75	S	12:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	12:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/29/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
04/29/75	S	19:30	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	19:30	-0.8	73.80	0.0	0.0	0.0	0.0	0.0
04/29/75	B	19:30	-0.8	84.00	0.0	0.0	0.0	0.0	0.0
04/29/75	S	24:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	24:00	-0.1	73.80	0.0	0.0	0.0	0.0	0.0
04/29/75	B	24:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/30/75	M	05:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:00	-0.4	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	12:00	-0.4	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	12:00	-0.4	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	19:30	0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	19:30	0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	19:30	0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	24:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	24:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	24:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/07/75	S	05:00	-0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/07/75	M	05:00	-0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/07/75	B	05:00	-0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/13/75	S	12:00	0.1	141.00	21.3	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/13/75	M	12:00	0.1	73.80	149.1	0.0	0.0	0.0	0.0
05/13/75	B	12:00	0.1	84.00	35.7	0.0	11.9	0.0	11.9
05/13/75	S	19:30	-0.9	141.00	49.6	0.0	0.0	0.0	0.0
05/13/75	M	19:30	-0.9	73.80	81.3	0.0	0.0	0.0	0.0
05/13/75	B	19:30	-0.9	84.00	202.4	47.6	0.0	0.0	47.6
05/13/75	S	24:00	0.3	141.00	78.0	0.0	0.0	0.0	0.0
05/13/75	M	24:00	0.3	73.80	460.7	0.0	0.0	0.0	0.0
05/13/75	B	24:00	0.3	84.00	214.3	11.9	0.0	0.0	11.9
05/14/75	S	04:30	-0.3	141.00	163.1	0.0	0.0	0.0	0.0
05/14/75	M	04:30	-0.3	73.80	636.9	13.6	0.0	0.0	13.6
05/14/75	B	04:30	-0.3	84.00	619.0	0.0	0.0	0.0	0.0
05/20/75	S	12:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
05/20/75	M	12:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
05/20/75	B	12:00	-0.9	84.00	23.8	0.0	0.0	0.0	0.0
05/20/75	S	20:00	0.2	141.00	269.5	0.0	0.0	0.0	0.0
05/20/75	M	20:00	0.2	73.80	257.5	0.0	0.0	0.0	0.0
05/20/75	B	20:00	0.2	84.00	190.5	0.0	0.0	0.0	0.0
05/20/75	S	24:00	-0.6	141.00	42.6	28.4	0.0	0.0	28.4
05/20/75	M	24:00	-0.6	73.80	27.1	0.0	0.0	0.0	0.0
05/20/75	B	24:00	-0.6	84.00	0.0	0.0	0.0	0.0	0.0
05/21/75	S	04:30	-0.5	141.00	219.9	0.0	7.1	0.0	7.1
05/21/75	M	04:30	-0.5	73.80	40.7	0.0	0.0	0.0	0.0
05/21/75	B	04:30	-0.5	84.00	0.0	0.0	0.0	0.0	0.0
05/27/75	S	12:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/27/75	M	12:00	-0.2	73.80	40.7	13.6	0.0	0.0	13.6
05/27/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/27/75	S	20:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
05/27/75	M	20:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/28/75	S	12:00	-0.2	141.00	21.3	21.3	0.0	0.0	21.3
05/28/75	M	12:00	-0.2	73.80	81.3	13.6	0.0	0.0	13.6
05/28/75	B	12:00	-0.2	84.00	59.5	47.6	11.9	0.0	59.5
05/28/75	S	20:00	-0.9	141.00	49.6	14.2	35.5	0.0	49.7
05/29/75	M	20:00	-0.9	73.80	0.0	0.0	27.1	0.0	27.1
05/28/75	B	20:00	-0.9	84.00	0.0	0.0	11.9	0.0	11.9
05/29/75	S	00:00	0.0	141.00	113.5	21.3	7.1	0.0	28.4
05/29/75	M	00:00	0.0	73.80	40.7	13.6	27.1	0.0	40.7
05/29/75	B	00:00	0.0	84.00	0.0	0.0	0.0	0.0	0.0
05/29/75	S	05:00	-0.2	141.00	177.3	49.6	49.6	0.0	99.2
05/29/75	M	05:00	-0.2	73.80	40.7	81.3	0.0	0.0	81.3
05/29/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
06/03/75	S	12:00	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
06/03/75	M	12:00	-0.8	73.80	0.0	0.0	13.6	0.0	13.6
06/03/75	B	12:00	-0.8	84.00	0.0	0.0	11.9	0.0	11.9
06/03/75	S	20:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
06/03/75	M	20:00	-0.1	73.80	0.0	0.0	0.0	0.0	0.0
06/03/75	B	20:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
06/04/75	S	00:01	-0.5	141.00	0.0	0.0	14.2	0.0	14.2
06/04/75	M	00:01	-0.5	73.80	0.0	54.2	67.8	0.0	122.0
06/04/75	B	00:01	-0.5	84.00	0.0	131.0	309.5	0.0	440.5
06/04/75	S	04:00	-0.4	141.00	0.0	0.0	14.2	0.0	14.2
06/04/75	M	04:00	-0.4	73.80	0.0	0.0	203.3	0.0	203.3
06/04/75	B	04:00	-0.4	84.00	0.0	0.0	35.7	0.0	35.7
06/10/75	S	12:00	0.6	11.75	0.0	170.2	595.7	0.0	765.9
06/10/75	M	12:00	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:00	0.6	7.00	0.0	857.1	4285.7	0.0	5142.8
06/10/75	S	12:15	0.6	11.75	0.0	85.1	0.0	0.0	85.1

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	M	12:15	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:15	0.6	7.00	0.0	714.3	1000.0	0.0	1714.3
06/10/75	S	12:30	0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	12:30	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:30	0.6	7.00	0.0	0.0	142.9	0.0	142.9
06/10/75	S	12:40	0.6	11.75	0.0	0.0	170.2	0.0	170.2
06/10/75	M	12:40	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:40	0.6	7.00	0.0	428.6	571.4	0.0	1000.0
06/10/75	S	12:50	0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	12:50	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:50	0.6	7.00	0.0	0.0	1714.3	0.0	1714.3
06/10/75	S	20:01	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:01	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:01	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:16	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:16	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:15	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:26	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:26	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:26	-0.6	7.00	0.0	0.0	142.9	0.0	142.9
06/10/75	S	20:37	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:37	-0.6	6.15	0.0	0.0	162.6	0.0	162.6
06/10/75	B	20:37	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:50	-0.6	11.75	0.0	0.0	85.1	0.0	85.1
06/10/75	M	20:50	-0.6	6.15	0.0	0.0	650.4	0.0	650.4
06/10/75	B	20:50	-0.6	7.00	0.0	0.0	571.4	0.0	571.4
06/11/75	S	00:[illegible]	0.3	11.75	0.0	0.0	85.1	0.0	85.1
06/11/75	M	00:[illegible]	0.3	6.15	0.0	0.0	487.8	0.0	487.8

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	B	00:00	0.3	7.00	0.0	0.0	285.7	0.0	285.7
06/11/75	S	00:16	0.3	11.75	85.1	0.0	170.2	0.0	170.2
06/11/75	M	00:16	0.3	6.15	0.0	0.0	1138.2	0.0	1138.2
06/11/75	B	00:16	0.3	7.00	0.0	0.0	2571.4	0.0	2571.4
06/11/75	S	00:35	0.3	11.75	0.0	0.0	85.1	0.0	85.1
06/11/75	M	00:35	0.3	6.15	0.0	0.0	1626.0	0.0	1626.0
06/11/75	B	00:35	0.3	7.00	0.0	0.0	3571.4	0.0	3571.4
06/11/75	S	00:54	0.3	11.75	0.0	0.0	1021.3	0.0	1021.3
06/11/75	M	00:54	0.3	6.15	0.0	0.0	5040.7	0.0	5040.7
06/11/75	B	00:54	0.3	7.00	0.0	0.0	7428.6	0.0	7428.6
06/11/75	S	01:12	0.3	11.75	0.0	0.0	255.3	0.0	255.3
06/11/75	M	01:12	0.3	6.15	0.0	0.0	2113.8	0.0	2113.8
06/11/75	B	01:12	0.3	7.00	0.0	0.0	2714.3	0.0	2714.3
06/11/75	S	05:03	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:03	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:03	-0.8	7.00	0.0	0.0	285.7	0.0	285.7
06/11/75	S	05:17	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
06/11/75	B	05:17	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:32	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:32	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
06/11/75	B	05:32	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:45	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:45	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:45	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:57	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:57	-0.8	7.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	S	12:07	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:07	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:07	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:32	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:32	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:32	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:51	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:51	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:51	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:04	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:04	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:04	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:16	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:16	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:16	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:14	-0.4	7.00	0.0	0.0	142.9	0.0	142.9
06/17/75	S	21:28	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:28	-0.4	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	21:28	-0.4	7.00	0.0	0.0	142.9	0.0	142.9
06/17/75	S	21:41	-0.4	11.75	0.0	0.0	85.1	0.0	85.1
06/17/75	M	21:41	-0.4	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	21:41	-0.4	7.00	0.0	0.0	285.7	0.0	285.7
06/17/75	S	21:57	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:57	-0.4	6.15	0.0	162.6	162.6	0.0	325.2
06/17/75	B	21:57	-0.4	7.00	0.0	0.0	428.6	0.0	428.6
06/17/75	S	22:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	22:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	22:14	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:12	-0.8	11.75	0.0	0.0	85.1	0.0	85.1
06/18/75	M	01:12	-0.8	6.15	0.0	0.0	650.4	0.0	650.4
06/18/75	B	01:12	-0.8	7.00	0.0	0.0	1285.7	0.0	1285.7
06/18/75	S	01:24	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:24	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:24	-0.8	7.00	0.0	0.0	571.4	0.0	571.4
06/18/75	S	01:35	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:35	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:35	-0.8	7.00	0.0	0.0	1714.3	0.0	1714.3
06/18/75	S	01:47	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:47	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/18/75	B	01:47	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:57	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:57	-0.8	7.00	0.0	0.0	285.7	0.0	285.7
06/18/75	S	05:20	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:20	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:20	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:29	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:29	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:29	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:38	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:38	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:38	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:47	0.1	11.75	0.0	0.0	85.1	0.0	85.1
06/18/75	M	05:47	0.1	6.15	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	05:47	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:56	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:56	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:56	0.1	7.00	0.0	0.0	142.9	0.0	142.9
06/24/75	S	12:10	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:10	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:10	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:28	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:28	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:28	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:39	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:39	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:39	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:50	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:50	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:50	-0.1	7.00	0.0	0.0	142.9	0.0	142.9
06/24/75	S	13:16	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:16	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:16	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:20	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:20	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:20	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:33	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:33	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:33	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:45	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:45	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:45	-0.7	7.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	S	20:58	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:58	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:58	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:09	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:09	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	21:09	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:45	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:45	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:45	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:59	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:59	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	23:59	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:15	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	00:15	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:15	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:30	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	00:30	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:30	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:45	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	00:45	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:45	0.2	7.00	0.0	0.0	142.9	0.0	142.9
06/25/75	S	05:00	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:00	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/25/75	B	05:00	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:16	-0.8	11.75	0.0	0.0	0.9	0.0	0.0
06/25/75	M	05:16	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:16	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:38	-0.8	11.75	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/25/75	M	05:38	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:38	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	06:01	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:01	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	06:01	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
06/25/75	S	06:21	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:21	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	06:21	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:13	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:13	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:13	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:26	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:26	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:26	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:38	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:38	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:38	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:49	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:49	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:49	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	13:01	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	13:01	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	13:01	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	19:30	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:30	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:30	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	19:[illegible]	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:[illegible]	-0.2	6.15	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	B	19:44	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	19:56	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:56	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:56	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	20:09	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:09	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:09	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	20:24	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:24	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:24	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:37	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:37	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:37	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:53	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:53	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:53	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:05	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:05	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:05	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:17	-0.6	11.73	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:17	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:17	-0.6	7.00	0.0	0.0	142.9	0.0	142.9
07/02/75	S	00:32	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:32	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:32	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	06:09	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:09	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	06:09	0.0	7.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

STRIPED BASS DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/16/75	S	13:25	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	13:25	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	13:25	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:35	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:35	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:35	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:47	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:47	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:47	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:58	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:58	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:58	-0.1	7.00	0.0	0.0	142.9	0.0	142.9
07/16/75	S	20:09	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	20:09	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	20:09	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	20:24	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	20:24	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	20:24	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	23:55	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	23:55	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	23:55	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	00:14	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	00:14	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:14	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	00:26	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	00:26	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:26	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	00:11	-0.8	11.75	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/23/75	S	05:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
04/23/75	M	05:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
04/23/75	B	05:00	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
04/23/75	S	12:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/23/75	M	12:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/23/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
04/23/75	S	19:30	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
04/23/75	M	19:30	-0.8	73.80	0.0	0.0	0.0	0.0	0.0
04/23/75	B	19:30	-0.8	84.00	0.0	0.0	0.0	0.0	0.0
04/23/75	S	24:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
04/23/75	M	24:00	-0.1	73.80	0.0	0.0	0.0	0.0	0.0
04/23/75	B	24:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/30/75	M	05:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:00	-0.4	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	12:00	-0.4	73.80	0.0	0.0	13.6	0.0	13.6
05/06/75	B	12:00	-0.4	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	19:30	0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	19:30	0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	19:30	0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	24:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	24:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	24:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/07/75	S	05:00	-0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/07/75	M	05:00	-0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/07/75	B	05:00	-0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/13/75	S	12:00	0.1	141.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/13/75	M	12:00	0.1	73.80	0.0	0.0	0.0	0.0	0.0
05/13/75	B	12:00	0.1	84.00	0.0	0.0	0.0	0.0	0.0
05/13/75	S	19:30	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
05/13/75	M	19:30	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
05/13/75	B	19:30	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
05/13/75	S	24:00	0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/13/75	M	24:00	0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/13/75	B	24:00	0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/14/75	S	04:30	-0.3	141.00	0.0	0.0	0.0	0.0	0.0
05/14/75	M	04:30	-0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/14/75	B	04:30	-0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/20/75	S	12:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
05/20/75	M	12:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
05/20/75	B	12:00	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
05/20/75	S	20:00	0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/20/75	M	20:00	0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/20/75	B	20:00	0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/20/75	S	24:00	-0.6	141.00	0.0	0.0	0.0	0.0	0.0
05/20/75	M	24:00	-0.6	73.80	0.0	0.0	0.0	0.0	0.0
05/20/75	B	24:00	-0.6	84.00	0.0	0.0	0.0	0.0	0.0
05/21/75	S	04:30	-0.5	141.00	0.0	0.0	14.2	0.0	14.2
05/21/75	M	04:30	-0.5	73.80	0.0	0.0	0.0	0.0	0.0
05/21/75	B	04:30	-0.5	84.00	0.0	0.0	0.0	0.0	0.0
05/27/75	S	12:00	-0.2	141.00	0.0	7.1	92.2	0.0	99.3
05/27/75	M	12:00	-0.2	73.80	0.0	0.0	81.3	0.0	81.3
05/27/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/27/75	S	20:00	-0.9	141.00	0.0	0.0	92.2	0.0	92.2
05/27/75	M	20:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/28/75	S	12:00	-0.2	141.00	0.0	0.0	7.1	0.0	7.1
05/28/75	M	12:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/28/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/28/75	S	20:00	-0.9	141.00	0.0	0.0	148.9	0.0	148.9
05/28/75	M	20:00	-0.9	73.80	0.0	0.0	40.7	0.0	40.7
05/28/75	B	20:00	-0.9	84.00	0.0	0.0	11.9	0.0	11.9
05/29/75	S	00:00	0.0	141.00	0.0	0.0	42.6	0.0	42.6
05/29/75	M	00:00	0.0	73.80	0.0	13.6	13.6	0.0	27.2
05/29/75	B	00:00	0.0	84.00	0.0	0.0	0.0	0.0	0.0
05/29/75	S	05:00	-0.2	141.00	0.0	0.0	70.9	0.0	70.9
05/29/75	M	05:00	-0.2	73.80	0.0	0.0	13.6	0.0	13.6
05/29/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
06/02/75	S	12:00	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
06/02/75	M	12:00	-0.8	73.80	0.0	0.0	13.6	0.0	13.6
06/02/75	B	12:00	-0.8	84.00	0.0	0.0	0.0	0.0	0.0
06/02/75	S	20:00	-0.1	141.00	0.0	0.0	14.2	0.0	14.2
06/02/75	M	20:00	-0.1	73.80	0.0	0.0	40.7	0.0	40.7
06/02/75	B	20:00	-0.1	84.00	0.0	0.0	23.8	0.0	23.8
06/04/75	S	00:01	-0.5	141.00	0.0	0.0	21.3	0.0	21.3
06/04/75	M	00:01	-0.5	73.80	0.0	0.0	81.3	0.0	81.3
06/04/75	B	00:01	-0.5	84.00	0.0	0.0	95.2	0.0	95.2
06/04/75	S	04:00	-0.4	141.00	0.0	0.0	14.2	0.0	14.2
06/04/75	M	04:00	-0.4	73.80	0.0	0.0	27.1	0.0	27.1
06/04/75	B	04:00	-0.4	84.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	12:00	0.6	11.75	0.0	0.0	851.1	0.0	851.1
06/10/75	M	12:00	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:00	0.6	7.00	0.0	0.0	5000.0	0.0	5000.0
06/10/75	S	12:15	0.6	11.75	0.0	0.0	255.3	0.0	255.3

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	M	12:15	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:15	0.6	7.00	0.0	0.0	3571.4	0.0	3571.4
06/10/75	S	12:30	0.6	11.75	0.0	0.0	510.6	0.0	510.6
06/10/75	M	12:30	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:30	0.6	7.00	0.0	0.0	1714.3	0.0	1714.3
06/10/75	S	12:40	0.6	11.75	0.0	0.0	340.4	0.0	340.4
06/10/75	M	12:40	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:40	0.6	7.00	0.0	0.0	857.1	0.0	857.1
06/10/75	S	12:50	0.6	11.75	0.0	0.0	340.4	0.0	340.4
06/10/75	M	12:50	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:50	0.6	7.00	0.0	0.0	1571.4	0.0	1571.4
06/10/75	S	20:01	-0.6	11.75	0.0	0.0	170.2	0.0	170.2
06/10/75	M	20:01	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:01	-0.6	7.00	0.0	0.0	285.7	0.0	285.7
06/10/75	S	20:16	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:16	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:16	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:26	-0.6	11.75	0.0	0.0	85.1	0.0	85.1
06/10/75	M	20:26	-0.6	6.15	0.0	162.6	813.0	0.0	975.6
06/10/75	B	20:26	-0.6	7.00	0.0	0.0	285.7	0.0	285.7
06/10/75	S	20:37	-0.6	11.75	0.0	0.0	255.3	0.0	255.3
06/10/75	M	20:37	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:37	-0.6	7.00	0.0	0.0	285.7	0.0	285.7
06/10/75	S	20:50	-0.6	11.75	0.0	0.0	255.3	0.0	255.3
06/10/75	M	20:50	-0.6	6.15	0.0	0.0	162.6	0.0	162.6
06/10/75	B	20:50	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:04	0.3	11.75	0.0	0.0	170.2	0.0	170.2
06/11/75	M	00:04	0.3	6.15	0.0	0.0	650.4	0.0	650.4

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	B	00:00	0.3	7.00	0.0	0.0	142.9	0.0	142.9
06/11/75	S	00:16	0.3	11.75	0.0	0.0	255.3	0.0	255.3
06/11/75	M	00:16	0.3	6.15	0.0	0.0	813.0	0.0	813.0
06/11/75	B	00:16	0.3	7.00	0.0	0.0	714.3	0.0	714.3
06/11/75	S	00:35	0.3	11.75	0.0	0.0	255.3	0.0	255.3
06/11/75	M	00:35	0.3	6.15	0.0	0.0	813.0	0.0	813.0
06/11/75	B	00:35	0.3	7.00	142.9	0.0	1142.9	0.0	1142.9
06/11/75	S	00:54	0.3	11.75	0.0	0.0	255.3	0.0	255.3
06/11/75	M	00:54	0.3	6.15	0.0	0.0	1951.2	0.0	1951.2
06/11/75	B	00:54	0.3	7.00	0.0	0.0	1285.7	0.0	1285.7
06/11/75	S	01:12	0.3	11.75	0.0	0.0	255.3	0.0	255.3
06/11/75	M	01:12	0.3	6.15	0.0	0.0	1300.8	0.0	1300.8
06/11/75	B	01:12	0.3	7.00	0.0	0.0	571.4	0.0	571.4
06/11/75	S	05:03	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:03	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
06/11/75	B	05:03	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
06/11/75	S	05:17	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:17	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:32	-0.8	11.75	0.0	0.0	85.1	0.0	85.1
06/11/75	M	05:32	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
06/11/75	B	05:32	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:45	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:45	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/11/75	B	05:45	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
06/11/75	S	05:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:57	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:57	-0.8	7.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	S	12:07	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:07	-0.9	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	12:07	-0.9	7.00	0.0	0.0	142.9	0.0	142.9
06/17/75	S	12:32	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:32	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:32	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:51	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:51	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:51	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:04	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:04	-0.9	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	13:04	-0.9	7.00	0.0	0.0	428.6	0.0	428.6
06/17/75	S	13:16	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:16	-0.9	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	13:16	-0.9	7.00	0.0	0.0	428.6	0.0	428.6
06/17/75	S	21:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:14	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:28	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:28	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:28	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:41	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:41	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:41	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:57	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:57	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:5[illegible]	-0.4	7.00	0.0	0.0	142.9	0.0	142.9
06/17/75	S	22:1[illegible]	-0.4	11.75	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	22:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	22:14	-0.4	7.00	0.0	0.0	142.9	0.0	142.9
06/18/75	S	01:12	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:12	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/18/75	B	01:12	-0.8	7.00	0.0	0.0	1000.0	0.0	1000.0
06/18/75	S	01:24	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:24	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:24	-0.8	7.00	0.0	0.0	285.7	0.0	285.7
06/18/75	S	01:35	-0.8	11.75	0.0	0.0	85.1	0.0	85.1
06/18/75	M	01:35	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:35	-0.8	7.00	0.0	0.0	1285.7	0.0	1285.7
06/18/75	S	01:47	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:47	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:47	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:57	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/18/75	B	01:57	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
06/18/75	S	05:20	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:20	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:20	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:29	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:29	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:29	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:38	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:38	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:38	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:47	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:47	0.1	6.15	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/18/75	B	05:47	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:56	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:56	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:56	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:10	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:10	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:10	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:28	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:28	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:28	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:39	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:39	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:39	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	12:50	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	12:50	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	12:50	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	13:16	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	13:16	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	13:16	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:20	-0.7	11.75	0.0	0.0	85.1	0.0	85.1
06/24/75	M	20:20	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:20	-0.7	7.00	0.0	0.0	428.6	0.0	428.6
06/24/75	S	20:33	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:33	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:33	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	20:45	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:45	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:45	-0.7	7.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/24/75	S	20:58	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	20:58	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	20:58	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	21:09	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	21:09	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
06/24/75	B	21:09	-0.7	7.00	0.0	0.0	142.9	0.0	142.9
06/24/75	S	23:45	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:45	0.2	6.15	0.0	0.0	325.2	0.0	325.2
06/24/75	B	23:45	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/24/75	S	23:59	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/24/75	M	23:59	0.2	6.15	0.0	0.0	162.6	0.0	162.6
06/24/75	B	23:59	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:15	0.2	11.75	0.0	0.0	85.1	0.0	85.1
06/25/75	M	00:15	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:15	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:30	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	00:30	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:30	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	00:45	0.2	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	00:45	0.2	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	00:45	0.2	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:00	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:00	-0.8	6.15	0.0	0.0	162.6	0.0	162.6
06/25/75	B	05:00	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	05:16	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	05:16	-0.8	6.15	162.6	0.0	0.0	0.0	0.0
06/25/75	B	05:16	-0.8	7.00	142.9	0.0	0.0	0.0	0.0
06/25/75	S	05:38	-0.8	11.75	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/25/75	M	05:38	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:38	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	06:01	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:01	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	06:01	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	06:21	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:21	-0.8	6.15	162.6	0.0	0.0	0.0	0.0
06/25/75	B	06:21	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	12:13	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:13	-0.7	6.15	0.0	0.0	162.6	0.0	162.6
07/01/75	B	12:13	-0.7	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	12:26	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:26	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:26	-0.7	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	12:38	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:38	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:38	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:49	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	12:49	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	12:49	-0.7	7.00	0.0	0.0	571.4	0.0	571.4
07/01/75	S	13:01	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	13:01	-0.7	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	13:01	-0.7	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	19:30	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:30	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:30	-0.2	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	19:44	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:44	-0.2	6.15	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	B	19:44	-0.2	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	19:56	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	19:56	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:56	-0.2	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	20:09	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:09	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:09	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	20:24	-0.2	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	20:24	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	20:24	-0.2	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:37	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:37	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:37	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	23:53	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:53	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	23:53	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:05	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:05	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:05	-0.6	7.00	0.0	0.0	142.9	0.0	142.9
07/02/75	S	00:17	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:17	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	00:17	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	00:32	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:32	-0.6	6.15	0.0	0.0	162.6	0.0	162.6
07/02/75	B	00:32	-0.6	7.00	0.0	0.0	142.9	0.0	142.9
07/02/75	S	06:09	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:09	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	06:09	0.0	7.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/02/75	S	06:18	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:18	0.0	6.15	0.0	0.0	162.6	0.0	162.6
07/02/75	B	06:18	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	06:28	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:28	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	06:28	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	06:38	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:38	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	06:38	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/02/75	S	06:50	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	06:50	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/02/75	B	06:50	0.0	7.00	0.0	0.0	0.0	142.9	142.9
07/08/75	S	12:00	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	12:00	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	12:00	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	12:08	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	12:08	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	12:08	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	12:23	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	12:23	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	12:23	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	12:32	0.0	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	12:32	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	12:32	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	12:45	0.0	117.50	0.0	0.0	0.0	0.0	0.0
07/08/75	M	12:45	0.0	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	12:45	0.0	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	19:45	-0.1	11.75	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/08/75	M	19:45	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	19:45	-0.1	7.00	0.0	0.0	142.9	0.0	142.9
07/08/75	S	19:56	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	19:56	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	19:56	-0.1	7.00	0.0	0.0	142.9	0.0	142.9
07/08/75	S	20:07	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	20:07	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	20:07	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	20:17	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	20:17	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	20:17	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	20:26	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	20:26	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	20:26	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/08/75	S	23:55	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/08/75	M	23:55	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/08/75	B	23:55	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/09/75	S	00:10	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/09/75	M	00:10	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/09/75	B	00:10	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/09/75	S	00:28	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/09/75	M	00:28	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/09/75	B	00:28	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/09/75	S	00:42	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/09/75	M	00:42	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/09/75	B	00:42	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/09/75	S	00:55	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/09/75	M	00:55	-0.9	6.15	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/16/75	S	12:25	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	12:25	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	12:25	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:35	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:35	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:35	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:47	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:47	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:47	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	19:58	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:58	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	19:58	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	20:09	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	20:09	-0.1	6.15	0.0	0.0	162.6	0.0	162.6
07/16/75	B	20:09	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	20:24	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	20:24	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	20:24	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/16/75	S	23:55	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	23:55	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/16/75	B	23:55	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	00:14	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	00:14	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:14	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
07/17/75	S	00:26	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	00:26	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:26	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
07/17/75	S	00:33	-0.8	11.75	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/17/75	M	00:38	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:38	-0.8	7.00	0.0	0.0	142.9	0.0	142.9
07/17/75	S	00:50	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	00:50	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	00:50	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	05:02	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	05:02	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	05:02	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	05:12	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	05:12	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	05:12	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	05:22	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	05:22	-0.1	6.15	0.0	0.0	162.6	0.0	162.6
07/17/75	B	05:22	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	05:33	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	05:33	-0.1	6.15	0.0	0.0	162.6	0.0	162.6
07/17/75	B	05:33	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/17/75	S	05:44	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/17/75	M	05:44	-0.1	6.15	0.0	0.0	0.0	0.0	0.0
07/17/75	B	05:44	-0.1	7.00	0.0	0.0	0.0	0.0	0.0
07/22/75	S	12:12	-0.1	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	12:12	-0.1	36.90	0.0	0.0	0.0	0.0	0.0
07/22/75	B	12:12	-0.1	42.00	0.0	0.0	0.0	0.0	0.0
07/22/75	S	13:00	-0.1	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	13:00	-0.1	36.90	0.0	0.0	0.0	0.0	0.0
07/22/75	B	13:00	-0.1	42.00	0.0	0.0	0.0	0.0	0.0
07/22/75	S	19:35	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	19:35	-0.4	36.90	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

WHITE PERCH DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/22/75	B	19:35	-0.4	42.00	0.0	0.0	0.0	0.0	0.0
07/22/75	S	20:10	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	20:10	-0.4	36.90	0.0	0.0	0.0	0.0	0.0
07/22/75	B	20:10	-0.4	42.00	0.0	0.0	0.0	0.0	0.0
07/22/75	S	23:30	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	23:30	-0.4	36.90	0.0	0.0	0.0	0.0	0.0
07/22/75	B	23:30	-0.4	42.00	0.0	0.0	0.0	0.0	0.0
07/23/75	S	00:13	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
07/23/75	M	00:13	-0.4	36.90	0.0	0.0	0.0	0.0	0.0
07/23/75	B	00:13	-0.4	42.00	0.0	0.0	0.0	0.0	0.0
07/23/75	S	05:05	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/23/75	M	05:05	-0.8	36.90	0.0	0.0	27.1	0.0	27.1
07/23/75	B	05:05	-0.8	42.00	0.0	0.0	23.8	0.0	23.8
07/23/75	S	05:44	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/23/75	M	05:44	-0.8	36.90	0.0	0.0	27.1	0.0	27.1
07/23/75	B	05:44	-0.8	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	12:00	-0.6	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	12:00	-0.6	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	12:00	-0.6	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	13:00	-0.6	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	13:00	-0.6	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	13:00	-0.6	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	20:07	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	20:07	-0.8	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	20:07	-0.8	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	20:45	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	20:[illegible]	-0.8	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	20:4[illegible]	-0.7	42.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/28/75	S	12:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/28/75	M	12:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/28/75	B	12:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/28/75	S	20:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
05/28/75	M	20:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
05/28/75	B	20:00	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
05/29/75	S	00:00	0.0	141.00	0.0	0.0	0.0	0.0	0.0
05/29/75	M	00:00	0.0	73.80	0.0	0.0	0.0	0.0	0.0
05/29/75	B	00:00	0.0	84.00	0.0	0.0	0.0	0.0	0.0
05/29/75	S	05:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/29/75	M	05.00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/29/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
06/02/75	S	12:00	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
06/02/75	M	12:00	-0.8	73.80	0.0	0.0	0.0	0.0	0.0
06/02/75	B	12:00	-0.8	84.00	0.0	0.0	0.0	0.0	0.0
06/02/75	S	20:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
06/02/75	M	20:00	-0.1	73.80	0.0	0.0	0.0	0.0	0.0
06/02/75	B	20:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
06/04/75	S	00:01	-0.5	141.00	0.0	0.0	0.0	0.0	0.0
06/04/75	M	00:01	-0.5	73.80	0.0	0.0	0.0	0.0	0.0
06/04/75	B	00:01	-0.5	84.00	0.0	0.0	11.9	0.0	11.9
06/04/75	S	04:00	-0.4	141.00	0.0	0.0	0.0	0.0	0.0
06/04/75	M	04:00	-0.4	73.80	0.0	0.0	0.0	0.0	0.0
06/04/75	B	04:00	-0.4	84.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	12.00	0.6	11.75	0.0	0.0	255.3	0.0	255.3
06/10/75	M	12:00	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:00	0.6	7.00	0.0	0.0	428.6	0.0	428.6
06/10/75	S	12:15	0.6	11.75	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/10/75	M	12:15	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:15	0.6	7.00	285.7	0.0	857.1	0.0	857.1
06/10/75	S	12:30	0.6	11.75	0.0	0.0	425.5	0.0	425.5
06/10/75	M	12:30	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:30	0.6	7.00	0.0	0.0	142.9	0.0	142.9
06/10/75	S	12:40	0.6	11.75	0.0	0.0	255.3	0.0	255.3
06/10/75	M	12:40	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:40	0.6	7.00	0.0	0.0	428.6	0.0	428.6
06/10/75	S	12:50	0.6	11.75	0.0	0.0	255.3	0.0	255.3
06/10/75	M	12:50	0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	12:50	0.6	7.00	0.0	0.0	142.9	0.0	142.9
06/10/75	S	20:01	-0.6	11.75	0.0	0.0	680.9	0.0	680.9
06/10/75	M	20:01	-0.6	6.15	0.0	0.0	325.2	0.0	325.2
06/10/75	B	20:01	-0.6	7.00	0.0	0.0	142.9	0.0	142.9
06/10/75	S	20:16	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:16	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:16	-0.6	7.00	0.0	0.0	285.7	0.0	285.7
06/10/75	S	20:26	-0.6	11.75	0.0	0.0	85.1	0.0	85.1
06/10/75	M	20:26	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:26	-0.6	7.00	0.0	0.0	428.6	0.0	428.6
06/10/75	S	20:37	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:37	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:37	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/10/75	S	20:50	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
06/10/75	M	20:50	-0.6	6.15	0.0	0.0	0.0	0.0	0.0
06/10/75	B	20:50	-0.6	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:00	0.3	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	00:00	0.3	6.15	0.0	0.0	325.2	0.0	325.2

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/11/75	B	00:00	0.3	7.00	0.0	0.0	142.9	0.0	142.9
06/11/75	S	00:16	0.3	11.75	85.1	0.0	255.3	0.0	255.3
06/11/75	M	00:16	0.3	6.15	0.0	0.0	1300.8	0.0	1300.8
06/11/75	B	00:16	0.3	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	00:35	0.3	11.75	0.0	0.0	936.2	0.0	936.2
06/11/75	M	00:35	0.3	6.15	0.0	0.0	1951.2	0.0	1951.2
06/11/75	B	00:35	0.3	7.00	142.9	0.0	571.4	0.0	571.4
06/11/75	S	00:54	0.3	11.75	0.0	0.0	1276.6	0.0	1276.6
06/11/75	M	00:54	0.3	6.15	0.0	0.0	975.6	0.0	975.6
06/11/75	B	00:54	0.3	7.00	142.9	0.0	1285.7	0.0	1285.7
06/11/75	S	01:12	0.3	11.75	0.0	0.0	1531.9	0.0	1531.9
06/11/75	M	01:12	0.3	6.15	0.0	0.0	2764.2	0.0	2764.2
06/11/75	B	01:12	0.3	7.00	0.0	0.0	2000.0	0.0	2000.0
06/11/75	S	05:03	-0.7	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:03	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:03	-0.8	7.00	285.7	0.0	142.9	0.0	142.9
06/11/75	S	05:17	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:17	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:17	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:32	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:32	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:32	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:45	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:45	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:45	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/11/75	S	05:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/11/75	M	05:57	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/11/75	B	05:57	-0.8	7.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	S	12:07	-0.9	11.75	0.9	0.0	0.0	0.0	0.0
06/17/75	M	12:07	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:07	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:32	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:32	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:32	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:51	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:51	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:51	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:04	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:04	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:04	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:16	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:16	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:16	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:14	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:28	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:28	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:28	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:41	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:41	-0.4	6.15	0.0	0.0	162.6	0.0	162.6
06/17/75	B	21:41	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:57	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:57	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:57	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	22:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/25/75	M	05:38	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	05:38	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	06:01	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:01	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	06:01	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/25/75	S	06:21	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/25/75	M	06:21	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/25/75	B	06:21	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:13	-0.7	11.75	0.0	0.0	255.3	0.0	255.3
07/01/75	M	12:13	-0.7	6.15	0.0	0.0	975.6	0.0	975.6
07/01/75	B	12:13	-0.7	7.00	0.0	0.0	428.6	0.0	428.6
07/01/75	S	12:26	-0.7	11.75	0.0	0.0	85.1	0.0	85.1
07/01/75	M	12:26	-0.7	6.15	0.0	0.0	650.4	0.0	650.4
07/01/75	B	12:26	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:38	-0.7	11.75	0.0	0.0	85.1	0.0	85.1
07/01/75	M	12:38	-0.7	6.15	0.0	0.0	325.2	0.0	325.2
07/01/75	B	12:38	-0.7	7.00	0.0	0.0	0.0	0.0	0.0
07/01/75	S	12:49	-0.7	11.75	0.0	0.0	85.1	0.0	85.1
07/01/75	M	12:49	-0.7	6.15	0.0	0.0	1463.4	0.0	1463.4
07/01/75	B	12:49	-0.7	7.00	0.0	0.0	142.9	0.0	142.9
07/01/75	S	13:01	-0.7	11.75	0.0	0.0	255.3	0.0	255.3
07/01/75	M	13:01	-0.7	6.15	0.0	0.0	1138.2	0.0	1138.2
07/01/75	B	13:01	-0.7	7.00	0.0	0.0	1428.6	0.0	1428.6
07/01/75	S	19:30	-0.2	11.75	0.0	0.0	170.2	0.0	170.2
07/01/75	M	19:30	-0.2	6.15	162.6	0.0	325.2	0.0	325.2
07/01/75	B	19:30	-0.2	7.00	142.9	0.0	142.9	0.0	142.9
07/01/75	S	19:44	-0.2	11.75	0.0	0.0	510.6	0.0	510.6
07/01/75	M	19:44	-0.2	6.15	0.0	325.2	813.0	0.0	1138.2

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/01/75	B	19:44	-0.2	7.00	0.0	0.0	428.6	0.0	428.6
07/01/75	S	19:56	-0.2	11.75	0.0	0.0	255.3	0.0	255.3
07/01/75	M	19:56	-0.2	6.15	0.0	0.0	0.0	0.0	0.0
07/01/75	B	19:56	-0.2	7.00	0.0	0.0	857.1	0.0	857.1
07/01/75	S	20:09	-0.2	11.75	0.0	0.0	1361.7	0.0	1361.7
07/01/75	M	20:09	-0.2	6.15	0.0	0.0	325.2	0.0	325.2
07/01/75	B	20:09	-0.2	7.00	0.0	428.6	1285.7	0.0	1714.3
07/01/75	S	20:24	-0.2	11.75	0.0	0.0	680.9	0.0	680.9
07/01/75	M	20:24	-0.2	6.15	0.0	162.6	2764.2	0.0	2926.8
07/01/75	B	20:24	-0.2	7.00	0.0	142.9	1285.7	0.0	1428.6
07/01/75	S	22:37	-0.6	11.75	0.0	0.0	425.5	170.2	595.7
07/01/75	M	23:37	-0.6	6.15	0.0	0.0	2113.8	325.2	2439.0
07/01/75	B	23:37	-0.6	7.00	0.0	0.0	3571.4	142.9	3714.3
07/01/75	S	23:53	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/01/75	M	23:53	-0.6	6.15	0.0	0.0	487.8	162.6	650.4
07/01/75	B	23:53	-0.6	7.00	0.0	0.0	857.1	0.0	857.1
07/02/75	S	00:05	-0.6	11.75	0.0	0.0	85.1	0.0	85.1
07/02/75	M	00:05	-0.6	6.15	0.0	0.0	650.4	0.0	650.4
07/02/75	B	00:05	-0.6	7.00	0.0	0.0	1142.9	0.0	1142.9
07/02/75	S	00:17	-0.6	11.75	0.0	0.0	0.0	0.0	0.0
07/02/75	M	00:17	-0.6	6.15	0.0	0.0	487.8	0.0	487.8
07/02/75	B	00:17	-0.6	7.00	0.0	0.0	1285.7	0.0	1285.7
07/02/75	S	00:32	-0.6	11.75	0.0	0.0	170.2	0.0	170.2
07/02/75	M	00:32	-0.6	6.15	162.6	0.0	325.2	0.0	325.2
07/02/75	B	00:32	-0.6	7.00	0.0	0.0	1142.9	0.0	1142.9
07/02/75	S	06:09	0.0	11.75	0.0	0.0	85.1	0.0	85.1
07/02/75	M	06:09	0.0	6.15	162.6	487.8	1463.4	0.0	1951.2
07/02/75	B	06:09	0.0	7.00	0.0	0.0	285.7	0.0	285.7

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/02/75	S	06:18	0.0	11.75	0.0	85.1	510.6	0.0	595.7
07/02/75	M	06:18	0.0	6.15	162.6	0.0	487.8	0.0	487.8
07/02/75	B	06:18	0.0	7.00	571.4	285.7	714.3	0.0	1000.0
07/02/75	S	06:28	0.0	11.75	0.0	0.0	255.3	0.0	255.3
07/02/75	M	06:28	0.0	6.15	0.0	162.6	813.0	0.0	975.6
07/02/75	B	06:28	0.0	7.00	714.3	285.7	285.7	0.0	571.4
07/02/75	S	06:38	0.0	11.75	0.0	85.1	595.7	0.0	680.8
07/02/75	M	06:38	0.0	6.15	325.2	0.0	1788.6	0.0	1788.6
07/02/75	B	06:38	0.0	7.00	714.3	428.6	714.3	0.0	1142.9
07/02/75	S	06:50	0.0	11.75	340.4	0.0	425.5	0.0	425.5
07/02/75	M	06:50	0.0	6.15	162.6	0.0	650.4	0.0	650.4
07/02/75	B	06:50	0.0	7.00	1142.9	571.4	2285.7	0.0	2857.1
07/08/75	S	12:00	0.0	11.75	19914.9	6212.8	1276.6	0.0	7489.4
07/08/75	M	12:00	0.0	6.15	71869.9	12032.	9105.7	0.0	21138.2
07/08/75	B	12:00	0.0	7.00	65428.6	11714.	2142.9	0.0	13857.2
07/08/75	S	12:08	0.0	11.75	17787.2	936.2	1702.1	0.0	2638.3
07/08/75	M	12:08	0.0	6.15	56097.6	13008.	2764.2	0.0	15772.3
07/08/75	B	12:08	0.0	7.00	67000.0	15714.	2000.0	0.0	17714.3
07/08/75	S	12:23	0.0	11.75	15319.1	4085.1	4255.3	0.0	8340.4
07/08/75	M	12:23	0.0	6.15	65853.7	8617.9	3414.6	0.0	12032.5
07/08/75	B	12:23	0.0	7.00	78428.6	14285.	5285.7	0.0	19571.4
07/08/75	S	12:32	0.0	11.75	25702.1	3404.3	2638.3	0.0	6042.6
07/08/75	M	12:32	0.0	6.15	74471.5	3088.4	2926.8	0.0	6016.2
07/08/75	B	12:32	0.0	7.00	61428.6	9571.4	3428.6	0.0	13000.0
07/08/75	S	12:45	0.0	117.50	1914.9	68.1	221.3	0.0	289.4
07/08/75	M	12:45	0.0	6.15	43739.8	8292.7	1463.4	0.0	9756.1
07/08/75	B	12:45	0.0	7.00	32285.7	27428.	857.1	0.0	28285.7
07/08/75	S	19:45	-0.1	11.75	85.1	85.1	13276.6	0.0	13361.7

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/08/75	M	19:45	-0.1	6.15	162.6	650.4	53658.5	0.0	54308.9
07/08/75	B	19:45	-0.1	7.00	142.9	428.6	111857.	0.0	112285.7
07/08/75	S	19:56	-0.1	11.75	0.0	85.1	4340.4	0.0	4425.5
07/08/75	M	19:56	-0.1	6.15	813.0	2764.2	22601.6	0.0	25365.8
07/08/75	B	19:56	-0.1	7.00	1571.4	3714.3	24571.4	0.0	28285.7
07/08/75	S	20:07	-0.1	11.75	1872.3	85.1	1191.5	0.0	1276.6
07/08/75	M	20:07	-0.1	6.15	8292.7	6666.7	13170.7	0.0	19837.4
07/08/75	B	20:07	-0.1	7.00	10428.6	3428.6	38142.9	0.0	41571.5
07/08/75	S	20:17	-0.1	11.75	9276.6	7574.5	3829.8	0.0	11404.3
07/08/75	M	20:17	-0.1	6.15	24715.4	12357.	9756.1	0.0	22113.8
07/08/75	B	20:17	-0.1	7.00	27285.7	7857.1	11571.4	0.0	19428.5
07/08/75	S	20:26	-0.1	11.75	27063.8	8680.9	3404.3	0.0	12085.2
07/08/75	M	20:26	-0.1	6.15	77235.8	19674.	11544.7	0.0	31219.5
07/08/75	B	20:26	-0.1	7.00	81571.4	10714.	6857.1	285.7	17857.1
07/08/75	S	23:55	-0.9	11.75	16000.0	1872.3	30893.6	0.0	32765.9
07/08/75	M	23:55	-0.9	6.15	40975.6	3414.6	61951.2	0.0	65365.8
07/08/75	B	23:55	-0.9	7.00	36571.4	1714.3	45571.4	0.0	47285.7
07/09/75	S	00:10	-0.9	11.75	4170.2	1957.4	13191.5	0.0	15148.9
07/09/75	M	00:10	-0.9	6.15	10731.7	2764.2	40975.6	0.0	43739.8
07/09/75	B	00:10	-0.9	7.00	14571.4	2428.6	31714.3	0.0	34142.9
07/09/75	S	00:28	-0.9	11.75	8425.5	1021.3	18803.5	0.0	19829.8
07/09/75	M	00:28	-0.9	6.15	21463.4	1463.4	21951.2	0.0	23414.6
07/09/75	B	00:28	-0.9	7.00	18428.6	2000.0	27857.1	285.7	30142.8
07/09/75	S	00:42	-0.9	11.75	9617.0	680.9	26468.1	0.0	27149.0
07/09/75	M	00:42	-0.9	6.15	24327.6	1788.6	21463.4	162.6	23414.6
07/09/75	B	00:42	-0.9	7.00	25285.7	2000.0	24000.0	142.9	26142.9
07/09/75	S	00:55	-0.9	11.75	3574.5	1531.9	24510.6	85.1	26127.6
07/09/75	M	00:55	-0.9	6.15	8292.7	1463.4	64715.4	162.6	66341.4

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/09/75	B	00:55	-0.9	7.00	10714.3	1000.0	34571.4	285.7	35857.1
07/09/75	S	05:15	-0.7	11.75	4085.1	0.0	255.3	0.0	255.3
07/09/75	M	05:15	-0.7	6.15	15935.0	162.6	1951.2	0.0	2113.8
07/09/75	B	05:15	-0.7	7.00	18000.0	285.7	2714.3	0.0	3000.0
07/09/75	S	05:35	-0.7	11.75	7148.9	0.0	936.2	0.0	936.2
07/09/75	M	05:35	-0.7	6.15	29268.3	487.8	15122.0	0.0	15609.8
07/09/75	B	05:35	-0.7	7.00	31428.6	571.4	13857.1	0.0	14428.5
07/09/75	S	05:55	-0.7	11.75	6127.7	425.5	3659.6	0.0	4085.1
07/09/75	M	05:55	-0.7	6.15	37886.2	1626.0	21463.4	0.0	23089.4
07/09/75	B	05:55	-0.7	7.00	28571.4	2285.7	22142.9	0.0	24428.6
07/09/75	S	06:11	-0.7	11.75	6042.6	766.0	7829.8	0.0	8595.8
07/09/75	M	06:11	-0.7	6.15	14634.1	2113.8	17073.2	0.0	19187.0
07/09/75	B	06:11	-0.7	7.00	15285.7	2857.1	19714.3	0.0	22571.4
07/09/75	S	06:27	-0.7	11.75	4510.6	170.2	14553.2	0.0	14723.4
07/09/75	M	06:27	-0.7	6.15	14634.1	975.6	57561.0	0.0	58536.6
07/09/75	B	06:27	-0.7	7.00	18000.0	0.0	19285.7	0.0	19285.7
07/16/75	S	12:43	-0.9	11.75	0.0	0.0	510.6	0.0	510.6
07/16/75	M	12:43	-0.9	6.15	0.0	0.0	3414.6	0.0	3414.6
07/16/75	B	12:43	-0.9	7.00	0.0	0.0	3571.4	0.0	3571.4
07/16/75	S	12:55	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	12:55	-0.9	6.15	0.0	0.0	3252.0	0.0	3252.0
07/16/75	B	12:55	-0.9	7.00	0.0	0.0	3857.1	0.0	3857.1
07/16/75	S	13:05	-0.9	11.75	0.0	0.0	1446.8	0.0	1446.8
07/16/75	M	13:05	-0.9	6.15	0.0	0.0	5528.5	0.0	5528.5
07/16/75	B	13:05	-0.9	7.00	0.0	0.0	4285.7	0.0	4285.7
07/16/75	S	13:15	-0.9	11.75	0.0	0.0	766.0	0.0	766.0
07/16/75	M	13:15	-0.9	6.15	0.0	0.0	4227.6	0.0	4227.6
07/16/75	B	13:15	-0.9	7.00	0.0	0.0	3428.6	0.0	3428.6

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/16/75	S	13:25	-0.9	11.75	0.0	0.0	936.2	0.0	936.2
07/16/75	M	13:25	-0.9	6.15	0.0	0.0	2439.0	0.0	2439.0
07/16/75	B	13:25	-0.9	7.00	0.0	0.0	2142.9	0.0	2142.9
07/16/75	S	19:35	-0.1	11.75	0.0	0.0	0.0	0.0	0.0
07/16/75	M	19:35	-0.1	6.15	0.0	0.0	487.8	0.0	487.8
07/16/75	B	19:35	-0.1	7.00	0.0	0.0	142.9	0.0	142.9
07/16/75	S	19:47	-0.1	11.75	0.0	0.0	85.1	0.0	85.1
07/16/75	M	19:47	-0.1	6.15	0.0	0.0	975.6	0.0	975.6
07/16/75	B	19:47	-0.1	7.00	0.0	0.0	571.4	0.0	571.4
07/16/75	S	19:58	-0.1	11.75	0.0	0.0	340.4	0.0	340.4
07/16/75	M	19:58	-0.1	6.15	0.0	0.0	325.2	0.0	325.2
07/16/75	B	19:58	-0.1	7.00	0.0	0.0	1285.7	0.0	1285.7
07/16/75	S	20:09	-0.1	11.75	0.0	0.0	595.7	0.0	595.7
07/16/75	M	20:09	-0.1	6.15	0.0	0.0	1463.4	0.0	1463.4
07/16/75	B	20:09	-0.1	7.00	0.0	0.0	2428.6	142.9	2571.5
07/16/75	S	20:24	-0.1	11.75	0.0	0.0	595.7	0.0	595.7
07/16/75	M	20:24	-0.1	6.15	0.0	0.0	3089.4	0.0	3089.4
07/16/75	B	20:24	-0.1	7.00	0.0	0.0	7142.9	0.0	7142.9
07/16/75	S	23:55	-0.8	11.75	0.0	0.0	425.5	0.0	425.5
07/16/75	M	23:55	-0.8	6.15	0.0	0.0	650.4	0.0	650.4
07/16/75	B	23:55	-0.8	7.00	0.0	0.0	428.6	0.0	428.6
07/17/75	S	00:14	-0.8	11.75	0.0	0.0	340.4	0.0	340.4
07/17/75	M	00:14	-0.8	6.15	0.0	0.0	650.4	162.6	813.0
07/17/75	B	00:14	-0.8	7.00	0.0	0.0	285.7	142.9	428.6
07/17/75	S	00:26	-0.8	11.75	0.0	0.0	170.2	0.0	170.2
07/17/75	M	00:26	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
07/17/75	B	00:26	-0.8	7.00	0.0	0.0	285.7	0.0	285.7
07/17/75	S	00:38	-0.8	11.75	0.0	0.0	255.3	0.0	255.3

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/17/75	M	00:38	-0.8	6.15	0.0	0.0	487.8	0.0	487.8
07/17/75	B	00:38	-0.8	7.00	0.0	0.0	285.7	0.0	285.7
07/17/75	S	00:50	-0.8	11.75	0.0	0.0	85.1	0.0	85.1
07/17/75	M	00:50	-0.8	6.15	0.0	0.0	325.2	0.0	325.2
07/17/75	B	00:50	-0.8	7.00	0.0	0.0	571.4	0.0	571.4
07/17/75	S	05:02	-0.1	11.75	0.0	0.0	595.7	0.0	595.7
07/17/75	M	05:02	-0.1	6.15	0.0	0.0	2764.2	0.0	2764.2
07/17/75	B	05:02	-0.1	7.00	0.0	0.0	2285.7	0.0	2285.7
07/17/75	S	05:12	-0.1	11.75	0.0	0.0	510.6	0.0	510.6
07/17/75	M	05:12	-0.1	6.15	0.0	0.0	1463.4	0.0	1463.4
07/17/75	B	05:12	-0.1	7.00	0.0	0.0	1571.4	0.0	1571.4
07/17/75	S	05:22	-0.1	11.75	0.0	0.0	936.2	0.0	936.2
07/17/75	M	05:22	-0.1	6.15	0.0	0.0	5853.7	0.0	5853.7
07/17/75	B	05:22	-0.1	7.00	0.0	0.0	7142.9	0.0	7142.9
07/17/75	S	05:33	-0.1	11.75	0.0	0.0	680.9	0.0	680.9
07/17/75	M	05:33	-0.1	6.15	0.0	0.0	3577.2	0.0	3577.2
07/17/75	B	05:33	-0.1	7.00	0.0	0.0	3714.3	0.0	3714.3
07/17/75	S	05:44	-0.1	11.75	0.0	0.0	340.4	0.0	340.4
07/17/75	M	05:44	-0.1	6.15	0.0	0.0	1626.0	0.0	1626.0
07/17/75	B	05:44	-0.1	7.00	0.0	0.0	2428.6	0.0	2428.6
07/22/75	S	12:12	-0.1	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	12:12	-0.1	36.90	0.0	0.0	108.4	0.0	108.4
07/22/75	B	12:12	-0.1	42.00	0.0	0.0	23.8	0.0	23.8
07/22/75	S	13:00	-0.1	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	13:00	-0.1	36.90	0.0	0.0	108.4	0.0	108.4
07/22/75	B	13:00	-0.1	42.00	0.0	0.0	47.6	0.0	47.6
07/22/75	S	19:35	-0.4	70.50	0.0	0.0	14.2	0.0	14.2
07/22/75	M	19:35	-0.4	36.90	0.0	0.0	54.2	0.0	54.2

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/22/75	B	19:35	-0.4	42.00	0.0	0.0	95.2	0.0	95.2
07/22/75	S	20:10	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
07/22/75	M	20:10	-0.4	36.90	0.0	0.0	27.1	0.0	27.1
07/22/75	B	20:10	-0.4	42.00	0.0	0.0	47.6	0.0	47.6
07/22/75	S	23:30	-0.4	70.50	0.0	0.0	156.0	28.4	184.4
07/22/75	M	23:30	-0.4	36.90	0.0	0.0	0.0	0.0	0.0
07/22/75	B	23:30	-0.4	42.00	0.0	0.0	142.9	0.0	142.9
07/23/75	S	00:13	-0.4	70.50	0.0	0.0	241.1	0.0	241.1
07/23/75	M	00:13	-0.4	36.90	0.0	0.0	650.4	0.0	650.4
07/23/75	B	00:13	-0.4	42.00	0.0	0.0	809.5	0.0	809.5
07/23/75	S	05:05	-0.8	70.50	0.0	0.0	28.4	0.0	28.4
07/23/75	M	05:05	-0.8	36.90	0.0	0.0	406.5	54.2	460.7
07/23/75	B	05:05	-0.8	42.00	0.0	0.0	71.4	142.9	214.3
07/23/75	S	05:44	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/23/75	M	05:44	-0.8	36.90	0.0	0.0	0.0	0.0	0.0
07/23/75	B	05:44	-0.8	42.00	0.0	0.0	119.0	23.8	142.8
07/29/75	S	12:00	-0.6	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	12:00	-0.6	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	12:00	-0.6	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	13:00	-0.6	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	13:00	-0.6	36.90	0.0	0.0	0.0	0.0	0.0
07/29/75	B	13:00	-0.6	42.00	0.0	0.0	0.0	0.0	0.0
07/29/75	S	20:07	-0.8	70.50	0.0	0.0	0.0	0.0	0.0
07/29/75	M	20:07	-0.8	36.90	0.0	0.0	189.7	0.0	189.7
07/29/75	B	20:07	-0.8	42.00	0.0	0.0	714.3	0.0	714.3
07/29/75	S	20:43	-0.8	70.50	0.0	0.0	85.1	28.4	113.5
07/29/75	M	20:43	-0.8	36.90	0.0	0.0	677.5	27.1	704.6
07/29/75	B	20:43	-0.7	42.00	0.0	0.0	1857.1	357.1	2214.2

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/29/75	S	23:30	-0.6	70.50	0.0	0.0	56.7	0.0	56.7
07/29/75	M	23:30	-0.6	36.90	0.0	0.0	243.9	81.3	325.2
07/29/75	B	23:30	-0.6	42.00	0.0	0.0	190.5	47.6	238.1
07/30/75	S	00:05	-0.6	70.50	0.0	0.0	99.3	42.6	141.9
07/30/75	M	00:05	-0.6	36.90	0.0	0.0	406.5	27.1	433.6
07/30/75	B	00:05	-0.6	42.00	0.0	0.0	333.3	0.0	333.3
07/30/75	S	04:54	-0.2	70.50	0.0	0.0	28.4	14.2	42.6
07/30/75	M	04:54	-0.2	36.90	0.0	0.0	108.4	27.1	135.5
07/30/75	B	04:54	-0.2	42.00	0.0	0.0	166.7	166.7	333.4
07/30/75	S	05:31	-0.2	70.50	0.0	0.0	0.0	0.0	0.0
07/30/75	M	05:31	-0.2	36.90	0.0	0.0	0.0	0.0	0.0
07/30/75	B	05:31	-0.2	42.00	0.0	0.0	0.0	0.0	0.0
08/05/75	S	12:05	-0.4	70.50	0.0	0.0	113.5	0.0	113.5
08/05/75	M	12:05	-0.4	36.90	0.0	0.0	975.5	0.0	975.6
08/05/75	B	12:05	-0.4	42.00	47.6	0.0	523.8	0.0	523.8
08/05/75	S	12:50	-0.4	70.50	411.3	0.0	368.8	0.0	368.8
08/05/75	M	12:50	-0.4	36.90	894.3	0.0	1788.6	0.0	1788.6
08/05/75	B	12:50	-0.4	42.00	1666.7	0.0	4571.4	190.5	4761.9
08/05/75	S	20:50	0.3	70.50	453.9	0.0	482.3	0.0	482.3
08/05/75	M	20:50	0.3	36.90	704.6	0.0	542.0	0.0	542.0
08/05/75	B	20:50	0.3	42.00	547.6	0.0	214.3	0.0	214.3
08/05/75	S	21:25	0.3	70.50	780.1	0.0	851.1	0.0	851.1
08/05/75	M	21:25	0.3	36.90	894.3	0.0	1327.9	0.0	1327.9
08/05/75	B	21:25	0.3	42.00	2257.1	0.0	666.7	23.8	690.5
08/06/75	S	00:02	0.0	70.50	198.6	0.0	3461.0	42.6	3503.6
08/06/75	M	00:02	0.0	36.90	569.1	0.0	7642.3	54.2	7696.5
08/06/75	B	00:02	0.0	42.00	857.1	0.0	3523.8	71.4	3595.2
08/06/75	S	00:49	0.0	70.50	340.4	0.0	766.0	0.0	766.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/06/75	M	00:49	0.0	36.90	1571.8	0.0	3956.6	54.2	4010.8
08/06/75	B	00:49	0.0	42.00	2071.4	0.0	7142.9	119.0	7261.9
08/06/75	S	04:58	-0.1	70.50	56.7	0.0	468.1	0.0	468.1
08/06/75	M	04:58	-0.1	36.90	135.5	0.0	1924.1	135.5	2059.6
08/06/75	B	04:58	-0.1	42.00	71.4	0.0	2261.9	0.0	2261.9
08/06/75	S	05:38	-0.1	70.50	85.1	0.0	184.4	14.2	198.6
08/06/75	M	05:38	-0.1	36.90	54.2	0.0	325.2	0.0	325.2
08/06/75	B	05:38	-0.1	42.00	190.5	0.0	1738.1	23.8	1761.9
08/12/75	S	12:03	-0.3	70.50	0.0	0.0	85.1	0.0	85.1
08/12/75	M	12:03	-0.3	36.90	0.0	0.0	216.8	0.0	216.8
08/12/75	B	12:03	-0.3	42.00	0.0	0.0	404.8	0.0	404.8
08/12/75	S	12:41	-0.3	70.50	0.0	0.0	297.9	0.0	297.9
08/12/75	M	12:41	-0.3	36.90	0.0	0.0	352.3	0.0	352.3
08/12/75	B	12:41	-0.3	42.00	0.0	0.0	309.5	0.0	309.5
08/12/75	S	21:13	-0.8	70.50	0.0	0.0	695.0	14.2	709.2
08/12/75	M	21:13	-0.8	36.90	0.0	0.0	2330.6	54.2	2384.8
08/12/75	B	21:13	-0.8	42.00	0.0	0.0	3952.4	714.3	4666.7
08/12/75	S	21:50	-0.8	70.50	0.0	0.0	2099.3	184.4	2283.7
08/12/75	M	21:50	-0.8	36.90	0.0	0.0	6151.8	81.3	6233.1
08/12/75	B	21:50	8.0	420.00	0.0	0.0	578.6	28.6	607.2
08/12/75	S	23:51	-0.6	70.50	0.0	0.0	595.7	42.6	638.3
08/12/75	M	23:51	-0.6	36.90	0.0	0.0	189.7	0.0	189.7
08/12/75	B	23:51	-0.6	42.00	0.0	0.0	357.1	0.0	357.1
08/13/75	S	00:31	-0.6	70.50	0.0	0.0	0.0	0.0	0.0
08/13/75	M	00:31	-0.6	36.90	0.0	0.0	135.5	0.0	135.5
08/13/75	B	00:31	-0.6	42.00	0.0	0.0	357.1	0.0	357.1
08/13/75	S	04:40	0.9	70.50	0.0	0.0	113.5	28.4	141.9
08/13/75	M	04:40	0.9	36.90	0.0	0.0	406.5	54.2	460.7

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/12/75	B	04:40	0.5	42.00	0.0	0.0	547.6	142.9	690.5
08/13/75	S	05:20	0.5	70.50	0.0	0.0	439.7	28.4	468.1
08/13/75	M	05:20	0.5	36.90	0.0	0.0	867.2	0.0	867.2
08/13/75	B	05:20	0.5	42.00	0.0	0.0	690.5	119.0	809.5
08/19/75	S	12:33	-0.4	70.50	0.0	0.0	14.2	0.0	14.2
08/19/75	M	12:33	-0.4	36.90	0.0	0.0	81.3	0.0	81.3
08/19/75	B	12:33	-0.4	42.00	0.0	0.0	23.8	0.0	23.8
08/19/75	S	13:11	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
08/19/75	M	13:11	-0.4	36.90	0.0	0.0	108.4	0.0	108.4
08/19/75	B	13:11	-0.4	42.00	0.0	0.0	95.2	0.0	95.2
08/19/75	S	20:20	0.0	70.50	0.0	0.0	127.7	14.2	141.9
08/19/75	M	20:20	0.0	36.90	0.0	0.0	189.7	27.1	216.8
08/19/75	B	20:20	0.0	42.00	0.0	0.0	214.3	0.0	214.3
08/19/75	S	20:57	0.0	70.50	0.0	0.0	312.1	0.0	312.1
08/19/75	M	20:57	0.0	36.90	0.0	0.0	514.9	54.2	569.1
08/19/75	B	20:57	0.0	42.00	0.0	0.0	261.9	0.0	261.9
08/19/75	S	23:41	0.0	70.50	0.0	0.0	354.5	14.2	368.8
08/19/75	M	23:41	0.0	36.90	0.0	0.0	514.9	0.0	514.9
08/19/75	B	23:41	0.0	42.00	0.0	0.0	333.3	0.0	333.3
08/20/75	S	00:16	0.0	70.50	0.0	0.0	156.0	42.6	198.6
08/20/75	M	00:16	0.0	36.90	0.0	0.0	596.2	27.1	623.3
08/20/75	B	00:16	0.0	42.00	0.0	0.0	1047.6	23.8	1071.4
08/20/75	S	04:52	-0.9	70.50	0.0	0.0	127.7	99.3	227.0
08/20/75	M	04:52	-0.9	36.90	0.0	0.0	596.2	243.9	840.1
08/20/75	B	04:52	-0.9	42.00	0.0	0.0	833.3	642.9	1476.2
08/20/75	S	05:28	-0.9	70.50	0.0	0.0	56.7	0.0	56.7
08/20/75	M	05:28	-0.9	36.90	0.0	0.0	271.0	27.1	298.1
08/20/75	B	05:28	-0.9	42.00	0.0	0.0	571.4	71.4	642.8

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

BAY ANCHOVY DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/25/75	S	12:20	0.0	70.50	0.0	0.0	0.0	0.0	0.0
08/25/75	M	12:20	0.0	36.90	0.0	0.0	0.0	0.0	0.0
08/25/75	B	12:20	0.0	42.00	0.0	0.0	0.0	0.0	0.0
08/26/75	S	12:55	0.0	70.50	0.0	0.0	0.0	0.0	0.0
08/26/75	M	12:55	0.0	36.90	0.0	0.0	54.2	0.0	54.2
08/26/75	B	12:55	0.0	42.00	0.0	0.0	23.8	0.0	23.8
08/26/75	S	20:00	-0.7	70.50	0.0	0.0	14.2	0.0	14.2
08/26/75	M	20:00	-0.7	36.90	0.0	0.0	406.5	0.0	406.5
08/26/75	B	20:00	-0.7	42.00	0.0	0.0	881.0	71.4	952.4
08/26/75	S	20:37	-0.7	70.50	0.0	0.0	113.5	28.4	141.9
08/26/75	M	20:37	-0.7	36.90	0.0	0.0	216.8	27.1	243.9
08/26/75	B	20:37	-0.7	42.00	0.0	0.0	547.6	0.0	547.6
08/26/75	S	23:42	-0.3	70.50	0.0	0.0	14.2	56.7	70.9
08/26/75	M	23:42	-0.3	36.90	0.0	0.0	0.0	81.3	81.3
08/26/75	B	23:42	-0.3	42.00	0.0	0.0	47.6	0.0	47.6
08/27/75	S	00:18	-0.3	70.50	0.0	0.0	14.2	56.7	70.9
08/27/75	M	00:18	-0.3	36.90	0.0	0.0	27.1	54.2	81.3
08/27/75	B	00:18	-0.3	42.00	0.0	0.0	47.6	0.0	47.6
08/27/75	S	05:04	-0.4	70.50	0.0	0.0	0.0	0.0	0.0
08/27/75	M	05:04	-0.4	36.90	0.0	0.0	27.1	135.5	162.6
08/27/75	B	05:04	-0.4	42.00	0.0	0.0	0.0	0.0	0.0
08/27/75	S	05:40	-0.4	70.50	0.0	0.0	28.4	28.4	56.8
08/27/75	M	05:40	-0.4	36.90	0.0	0.0	135.5	27.1	162.6
08/27/75	B	05:40	-0.4	42.00	0.0	0.0	190.5	0.0	190.5

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/11/75	S	12:30	-0.1	211.50	0.0	18.9	122.9	0.0	141.8
02/11/75	M	12:30	-0.1	110.70	0.0	81.3	560.1	0.0	641.4
02/11/75	B	12:30	-0.1	126.00	0.0	261.9	1222.2	0.0	1484.1
02/11/75	S	19:00	-0.8	211.50	0.0	127.7	156.0	0.0	283.7
02/11/75	M	19:00	-0.8	110.70	0.0	252.9	388.4	0.0	641.3
02/11/75	B	19:00	-0.8	126.00	0.0	222.2	349.2	0.0	571.4
02/12/75	S	00:30	-0.4	211.50	0.0	179.7	870.0	0.0	1049.7
02/12/75	M	00:30	-0.4	110.70	0.0	234.9	1490.5	0.0	1725.4
02/12/75	B	00:30	-0.4	126.00	0.0	428.6	1579.4	0.0	2008.0
02/12/75	S	07:30	-0.6	211.50	0.0	42.6	151.3	0.0	193.9
02/12/75	M	07:30	-0.6	110.70	0.0	90.3	225.8	0.0	316.1
02/12/75	B	07:30	-0.6	126.00	0.0	174.6	174.6	0.0	349.2
02/18/75	S	11:30	-0.6	141.00	0.0	78.0	92.2	0.0	170.2
02/18/75	M	11:30	-0.6	73.80	0.0	40.7	216.8	0.0	257.5
02/18/75	B	11:30	-0.6	84.00	0.0	23.8	261.9	0.0	285.7
02/18/75	S	18:00	-0.7	141.00	0.0	21.3	170.2	0.0	191.5
02/18/75	M	18:00	-0.7	73.80	0.0	122.0	596.2	0.0	718.2
02/18/75	B	18:00	-0.7	84.00	0.0	154.8	821.4	0.0	976.2
02/18/75	S	23:30	-0.5	141.00	0.0	78.0	170.2	0.0	248.2
02/18/75	M	23:30	-0.4	73.80	0.0	67.8	447.2	0.0	515.0
02/18/75	B	23:30	-0.4	84.00	0.0	59.5	547.6	0.0	607.1
02/19/75	S	06:30	-0.4	141.00	0.0	35.5	241.1	0.0	276.6
02/19/75	M	06:30	-0.4	73.80	0.0	40.7	569.1	0.0	609.8
02/19/75	B	06:30	-0.4	84.00	0.0	23.8	285.7	0.0	309.5
02/25/75	S	18:30	-0.4	141.00	0.0	0.0	99.3	0.0	99.3
02/25/75	M	18:30	-0.4	73.80	0.0	0.0	203.3	0.0	203.3
02/25/75	B	18:30	-0.5	84.00	0.0	23.8	154.8	0.0	178.6
03/25/75	S	24.00	-0.3	141.00	0.0	0.0	14.2	0.0	14.2

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
03/25/75	M	24:00	-0.3	73.80	0.0	54.2	0.0	0.0	54.2
03/25/75	B	24:00	-0.3	84.00	0.0	0.0	23.8	0.0	23.8
03/26/75	S	06:00	-0.6	141.00	0.0	0.0	21.3	0.0	21.3
03/26/75	M	06:00	-0.6	73.80	0.0	0.0	0.0	0.0	0.0
03/26/75	B	06:00	-0.6	84.00	0.0	11.9	59.5	0.0	71.4
03/26/75	S	12:00	-0.1	141.00	0.0	63.8	42.6	0.0	106.4
03/26/75	M	12:00	-0.1	73.80	0.0	203.3	27.1	0.0	230.4
03/26/75	B	12:00	-0.1	84.00	0.0	11.9	154.8	0.0	166.7
03/28/75	S	12:00	0.0	141.00	0.0	0.0	0.0	0.0	0.0
03/28/75	M	12:00	0.0	73.80	0.0	27.1	0.0	0.0	27.1
03/28/75	B	12:00	0.0	84.00	0.0	0.0	0.0	0.0	0.0
04/01/75	S	12:00	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
04/01/75	M	12:00	-0.8	73.80	0.0	13.6	0.0	0.0	13.6
04/01/75	B	12:00	-0.8	84.00	0.0	0.0	23.8	0.0	23.8
04/01/75	S	19:00	-0.7	141.00	0.0	0.0	14.2	0.0	14.2
04/01/75	M	19:00	-0.8	73.80	0.0	0.0	13.6	0.0	13.6
04/01/75	B	19:00	-0.7	84.00	0.0	23.8	0.0	0.0	23.8
04/01/75	S	24:00	-0.7	141.00	0.0	14.2	0.0	0.0	14.2
04/01/75	M	24:00	-0.7	73.80	0.0	13.6	27.1	0.0	40.7
04/01/75	B	24:00	-0.7	84.00	0.0	23.8	0.0	0.0	23.8
04/02/75	S	05:30	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
04/02/75	M	05:30	-0.1	73.80	0.0	0.0	0.0	0.0	0.0
04/02/75	B	05:30	-0.1	84.00	0.0	0.0	11.9	0.0	11.9
04/08/75	S	12:00	-0.4	141.00	0.0	0.0	35.5	0.0	35.5
04/08/75	M	12:00	-0.4	73.80	0.0	0.0	40.7	0.0	40.7
04/08/75	B	12:00	-0.4	84.00	0.0	0.0	142.9	0.0	142.9
04/08/75	S	19:00	-0.5	141.00	0.0	0.0	0.0	0.0	0.0
04/08/75	M	19:00	-0.5	73.80	0.0	0.0	13.6	0.0	13.6

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/08/75	B	19.00	-0.5	84.00	0.0	0.0	11.9	0.0	11.9
04/08/75	S	24:00	-0.3	141.00	0.0	0.0	35.5	0.0	35.5
04/08/75	M	24:00	-0.3	73.80	0.0	0.0	203.3	13.6	216.9
04/08/75	B	24:00	-0.3	84.00	0.0	0.0	166.7	0.0	166.7
04/09/75	S	05:30	-0.9	141.00	0.0	0.0	28.4	0.0	28.4
04/09/75	M	05:30	-0.9	73.80	0.0	0.0	189.7	0.0	189.7
04/09/75	B	05:30	-0.9	84.00	0.0	0.0	142.9	0.0	142.9
04/15/75	S	12:00	-0.3	141.00	0.0	0.0	0.0	0.0	0.0
04/15/75	M	12:00	-0.3	73.80	0.0	0.0	0.0	0.0	0.0
04/15/75	B	12:00	-0.3	84.00	0.0	0.0	0.0	0.0	0.0
04/15/75	S	19:00	-0.9	84.00	0.0	0.0	59.5	0.0	59.5
04/15/75	M	19:00	-0.9	73.80	0.0	0.0	40.7	13.6	54.3
04/15/75	B	19:00	-0.9	84.00	0.0	0.0	95.2	0.0	95.2
04/15/75	S	24:00	-0.1	141.00	0.0	0.0	7.1	7.1	14.2
04/15/75	M	24:00	-0.1	73.80	0.0	0.0	13.6	0.0	13.6
04/15/75	B	24:00	-0.1	84.00	0.0	0.0	23.8	0.0	23.8
04/16/75	S	05:30	-0.4	141.00	0.0	0.0	0.0	0.0	0.0
04/16/75	M	05:30	-0.4	73.80	0.0	0.0	40.7	0.0	40.7
04/16/75	B	05:30	-0.4	84.00	0.0	0.0	23.8	0.0	23.8
04/22/75	S	12:00	-0.7	141.00	0.0	0.0	0.0	0.0	0.0
04/22/75	M	12:00	-0.7	73.80	0.0	0.0	13.6	0.0	13.6
04/22/75	B	12:00	-0.7	84.00	0.0	0.0	0.0	0.0	0.0
04/22/75	S	19:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
04/22/75	M	19:00	-0.1	73.80	0.0	0.0	13.6	0.0	13.6
04/22/75	B	19:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
04/22/75	S	24:00	-0.5	141.00	0.0	0.0	0.0	0.0	0.0
04/22/75	M	24:00	-0.5	73.80	0.0	0.0	0.0	0.0	0.0
04/22/75	B	24:00	-0.5	84.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ATLANTIC TOMCOD DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/23/75	S	05:00	-0.9	141.00	0.0	0.0	0.0	0.0	0.0
04/23/75	M	05:00	-0.9	73.80	0.0	0.0	0.0	0.0	0.0
04/23/75	B	05:00	-0.9	84.00	0.0	0.0	0.0	0.0	0.0
04/29/75	S	12:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	12:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/29/75	B	12:00	-0.2	84.00	0.0	0.0	11.9	0.0	11.9
04/29/75	S	19:30	-0.8	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	19:30	-0.8	73.80	0.0	0.0	0.0	0.0	0.0
04/29/75	B	19:30	-0.8	84.00	0.0	0.0	0.0	0.0	0.0
04/29/75	S	24:00	-0.1	141.00	0.0	0.0	0.0	0.0	0.0
04/29/75	M	24:00	-0.1	73.80	0.0	0.0	13.6	0.0	13.6
04/29/75	B	24:00	-0.1	84.00	0.0	0.0	0.0	0.0	0.0
04/30/75	S	05:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
04/30/75	M	05:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
04/30/75	B	05:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	12:00	-0.4	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	12:00	-0.4	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	12:00	-0.4	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	19:30	0.3	141.00	0.0	0.0	7.1	0.0	7.1
05/06/75	M	19:30	0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	19:30	0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/06/75	S	24:00	-0.2	141.00	0.0	0.0	0.0	0.0	0.0
05/06/75	M	24:00	-0.2	73.80	0.0	0.0	0.0	0.0	0.0
05/06/75	B	24:00	-0.2	84.00	0.0	0.0	0.0	0.0	0.0
05/07/75	S	05:00	-0.3	141.00	0.0	0.0	7.1	0.0	7.1
05/07/75	M	05:00	-0.3	73.80	0.0	0.0	0.0	0.0	0.0
05/07/75	B	05:00	-0.3	84.00	0.0	0.0	0.0	0.0	0.0
05/13/75	S	12:00	0.1	141.00	0.0	0.0	0.0	0.0	0.0

(A):S=SURFACE; M=MIDDLE; B=BOTTOM

HERRING DENSITY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	S	12:07	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:07	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:07	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	12:22	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:22	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:22	-0.9	7.00	0.0	0.0	0.0	142.9	142.9
06/17/75	S	12:51	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	12:51	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	12:51	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:04	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:04	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:04	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	13:16	-0.9	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	13:16	-0.9	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	13:16	-0.9	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:14	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:28	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:28	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:28	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:41	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:41	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:41	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	21:57	-0.4	11.75	0.0	0.0	0.0	0.0	0.0
06/17/75	M	21:57	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	21:57	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/17/75	S	22:14	-0.4	11.75	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM

HERRING DENSITY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/17/75	M	22:14	-0.4	6.15	0.0	0.0	0.0	0.0	0.0
06/17/75	B	22:14	-0.4	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:12	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:12	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:12	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:24	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:24	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:24	-0.8	7.00	0.0	0.0	0.0	285.7	285.7
06/18/75	S	01:35	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:35	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:35	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:47	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:47	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:47	-0.8	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	01:57	-0.8	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	01:57	-0.8	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	01:57	-0.8	7.00	0.0	0.0	0.0	142.9	142.9
06/18/75	S	05:20	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:20	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:20	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:29	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:29	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:29	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:38	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:38	0.1	6.15	0.0	0.0	0.0	0.0	0.0
06/18/75	B	05:38	0.1	7.00	0.0	0.0	0.0	0.0	0.0
06/18/75	S	05:47	0.1	11.75	0.0	0.0	0.0	0.0	0.0
06/18/75	M	05:47	0.1	6.15	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM

ALTERNATIVE INTAKE DESIGN WITH FISH HANDLING CAPABILITIES

BOWLINE POINT GENERATING STATION
UNITS 1 AND 2
ORANGE AND ROCKLAND UTILITIES, INC.

DECEMBER 1976

STONE & WEBSTER ENGINEERING CORPORATION
BOSTON, MASSACHUSETTS

STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS

ADDRESS ALL CORRESPONDENCE TO P.O. BOX 2325, BOSTON, MASS. 02107

NEW YORK
BOSTON
CHICAGO
HOUSTON
DENVER
CHERRY HILL, N.J.
PORTLAND, OREGON

DESIGN
CONSTRUCTION
REPORTS
EXAMINATIONS
CONSULTING
ENGINEERING

Mr. Barney Z. Baxter
Assistant Vice President
Orange & Rockland Utilities, Inc.
75 West Route 9
Spring Valley, NY 10977

December 17, 1976

J.O.No. 12835

Dear Sir:

REPORT ON ALTERNATIVE INTAKE DESIGNS WITH FISH HANDLING CAPABILITIES
BOWLINE POINT GENERATION STATION - UNITS 1 AND 2
ORANGE & ROCKLAND UTILITIES, INC.

Submitted herewith is the final report discussing our study of alternative intake designs for the Bowline Point Generation Station. The objective of the study was to investigate the potential biological effectiveness and engineering feasibility of various fish protective systems for reducing fish entrapment at Bowline Point. This report represents the completion of our efforts. It has been a pleasure working with you and others at Orange & Rockland.

If you should have any questions, or if we can be of further assistance to you, please feel free to contact me.

Very truly yours,

Peter Hofmann

Peter Hofmann
Assistant Chief
Environmental Engineering Division

Enclosure

EPT:jmm

TABLE OF CONTENTS

Section	Title	Page
	SUMMARY AND CONCLUSION	1
1.	INTRODUCTION	1-1
2.	PRESENT INTAKE DESIGN AND OPERATION	2-1
3.	IMPINGEMENT EXPERIENCE AT BOWLINE POINT GENERATING STATION	3-1
3.1	INTRODUCTION	3-1
3.2	IMPINGEMENT	3-1
4.	ALTERNATIVE INTAKE DESIGN MODIFICATIONS	4.1-1
4.1	INTRODUCTION	4.1-1
4.2	FISH DIVERSION CONCEPTS (Schemes 1 through 4)	4.2-1
4.2.1	Biological Considerations	4.2-1
4.2.2	Alternative Intake Designs Utilizing Angled Flush-Mounted Traveling Screens	4.2-6
4.2.3	Alternative Intake Design Utilizing Inclined Plane Screens (Scheme 4)	4.2-11
4.3	FISH COLLECTION AND REMOVAL CONCEPT	4.3-1
4.3.1	Biological Considerations	4.3-1
4.3.2	Alternative Intake Design Utilizing Existing Traveling Screens Modified with Fish Lifting Troughs and Gentle Spraywash (Scheme 5)	4.3-3
4.4	FISH DETERRENT CONCEPT	4.4-1
4.4.1	Deterrent Devices	4.4-1
4.4.2	Alternative Intake Design Utilizing Fish Deterrent Devices at the Bowline Pond Inlet	4.4-7
4.5	FISH TRANSPORTATION SYSTEMS	4.5-1
4.5.1	System Descriptions	4.5-1
4.5.1.1	Jet Pump	4.5-1
4.5.1.2	Lift Basket System	4.5-2
4.5.1.3	Centrifugal Pumps	4.5-3
4.5.2	Transport Pipe Design Criteria	4.5-4
	REFERENCES	R-1

LIST OF TABLES

Table	Title	After Page
2-1	Possible Flow Rates and Velocities	2-1
3-1	Summary of Initial Survival of Impinged Fish	3-3

LIST OF FIGURES

Figure	Title	After Page
2-1	General Plan, Circulating Water System	2-1
2-2	Circulating Water Intake Structure (Section and Profile)	2-1
4.2-1	Range of Angles in Lines of Louvers Tested and Vectors of Force in Flow and Fish Movement	4.2-3
4.2-2	45-Degree Inclined Plane Screen	4.2-5
4.2-3	Section of Downstream Migrant Diversion Structure	4.2-5
4.2-4	Fixed Inclined Plane Perforated Plate Utilized to Collect Hudson River Species	4.2-6
4.2-5	Scheme 1, Screen Arrangement with Needed Approach Channel	4.2-7
4.2-6	Side Elevation of Flush-Mounted Traveling Screen	4.2-8
4.2-7	Scheme 2, Chevron Arrangement East of Existing Structure	4.2-9
4.2-8	Details of Scheme 2 Angled Screen Structure	4.2-10
4.2-9	Scheme 3, Chevron Arrangement in Front of Existing Structure	4.2-10
4.2-10	Scheme 4, Inclined Plane Screen	4.2-11
4.2-11	Conceptual Arrangement of Screen and Bypass	4.2-12
4.3-1	Scheme 5, Modified Traveling Screen	4.3-3
4.3-2	Combination Trash and Fish Screen	4.3-3

LIST OF FIGURES (CONT'D)

Figure	Title	After Page
4.4-1	Water Jet Efficiencies in Deflecting Fish	4.4-6
4.4-2	Scheme 6, Fish Deterrent Device	4.4-7
4.4-3	Design of Behavioral Barriers	4.4-8
4.5-1	Types of Jet Pumps	4.5-1
4.5-2	Fish Bypass and Holding Chamber	4.5-2
4.5-3	Lift Basket	4.5-3

SUMMARY AND CONCLUSIONS

Stone & Webster Engineering Corporation (S&W) has conducted an evaluation study for Orange & Rockland Utilities, Inc. to develop alternative intake designs which incorporate fish protection and transportation devices. The designs are intended to reduce existing fish impingement losses at the 1200-MW Bowline Point Generating Station – Units 1 and 2, which withdraws a maximum of 1711 cfs of water from the Hudson River for cooling purposes.

On the basis of our study, which included a review of the available technology, six alternative schemes, incorporating angled flush-mounted traveling screens, inclined plane screens, modified conventional traveling screens, and several behavioral barrier devices, were selected for possible application at Bowline Point.

These schemes fall into three categories of fish protection concepts, as listed below:

Fish Diversion Concepts

Scheme 1 - Screen Arrangement Utilizing Existing Intake Structure with Angled Approach Channel

Scheme 2 - Angled Screens with a Chevron Arrangement Located East of the Existing Intake Structure

Scheme 3 - Angled Screens with a Chevron Arrangement Located in Front of Existing Intake Structure

Scheme 4 - Alternative Intake Design Utilizing Inclined Plane Screens

Fish Collection and Removal Concept

Scheme 5 - Alternative Intake Design Utilizing Existing Traveling Screens Modified with Fish Lifting Troughs and Gentle Spraywash

Fish Deterrent Concepts

Scheme 6 - Alternative Intake Design Utilizing Fish Deterrent Devices at Bowline Pond Inlet

(a) Air Bubble Curtain

(b) Hanging Chains

(c) Water Jet Curtain

These devices were chosen for their proven or potential biological effectiveness and their engineering practicability. Other schemes, incorporating different devices, were eliminated from consideration due to their limited effectiveness or their impracticability relative to the Bowline Point site.

An angled, flush-mounted traveling screen, which would divert fish to a bypass, is considered to be a potentially effective device for reducing impingement at Bowline Point. This device has been shown to be nearly 100 percent effective in diverting a number of Hudson River species with low resultant mortality. Therefore, three alternative schemes have been developed for possible application at Bowline Point. One scheme involves angling the direction of the approach flow to the existing screens, which would be modified to be flush-mounted. Such a design would require model studies to determine the best arrangement for directing the approach flow at the proper angle to the screens. The other two schemes are similar and involve construction of new screening structures with the flush-mounted screens set at an angle to the approach flow.

An inclined plane screen (Scheme 4) is also considered to have a good potential for effectively bypassing fish at Bowline Point. Although such a screen has not been utilized for this purpose at power plant intakes, successful applications at other types of water intakes indicate that further investigation is warranted. Because the screen is similar to a conventional screen, it offers several advantages over other diversion devices relative to construction and area requirements, particular for backfitting at an existing intake.

A scheme involving modification of the existing traveling screens to incorporate lifting troughs and a low-pressure spray wash (Scheme 5) is considered very practical for Bowline Point but may not be as biologically effective as the three fish diversion schemes. Since the scheme relies on the impingement of fish, some mortality could be expected as a result of this experience. If it is determined that this scheme has significant advantages over other concepts, it could be evaluated at Bowline Point by modifying one screen and conducting comparative mortality studies using the unmodified screens for comparison. If mortality levels are considered acceptable, the other screens could then be retrofitted.

On the basis of past experience, a fish deterrent device (Scheme 6) located at the inlet to Bowline Point is considered to have limited potential for biological effectiveness. However, such a scheme could act to prevent the movement of some fishes into the pond, thereby reducing the impingement potential at the intake structure. Further, a deterrent device could be used in conjunction with one of the other schemes to improve the overall fish handling capability of the Bowline Point intake system.

Schemes 1 through 5 would require a fish transportation system to return bypassed or collected fish to the Hudson River. Pipes would be used for this purpose with one or more jet pumps acting as the pumping unit(s). The jet pump is presently considered to be the most potentially effective device for transporting fish with low resultant mortality. Model studies should be conducted prior to installation to ensure that key Hudson River species can be transported through a pipe and jet pump without substantial mortality.

In conclusion, it is believed that any of the six schemes proposed for possible application at Bowline Point would reduce impingement losses. Each has inherent advantages and disadvantages relative to engineering and/or biological considerations. However, through further investigation (model studies, etc.) and a more detailed development of the design criteria for each conceptual scheme, it is expected that fish impingement losses at Bowline Point can be greatly reduced.

SECTION 1

INTRODUCTION

In July 1976, Stone & Webster Engineering Corporation (S&W) was requested by Orange & Rockland Utilities, Inc. to develop a number of alternative circulating water intake designs which would reduce existing fish losses due to impingement at the Bowline Point Generating Station - Units 1 and 2. This effort involved a review of the existing technology and a determination of the engineering practicality and potential biological effectiveness of the various intake designs which are presently in use at other sites or have been suggested for use in reducing impingement.

This report discusses the results of S&W's efforts and includes a description of the present Bowline Point intake design, a discussion of existing impingement, a general review of fish protection devices, and a detailed description of six alternative intake designs and modifications which were selected by S&W for possible application at the station, including the rationale by which they were selected.

SECTION 2

PRESENT INTAKE DESIGN AND OPERATION

The Bowline Point Generating Station consists of two similar units with a combined generating capacity of 1,200 MW. The station is situated on the west bank of the Hudson River, 38 miles north of the Battery. Units 1 and 2 began operation in September 1972 and May 1974, respectively.

Each unit withdraws approximately 384,000-gpm maximum (855 cfs), for once-through condenser cooling. The total 768,000 gpm (1,711 cfs) maximum flow is drawn to a common intake screenwell structure incorporating six circulating water pumps with associated trash racks and traveling water screens. The screenwell is located on the northwest bank of Bowline Pond (Figure 2-1). Water enters the 53-acre pond through an inlet which is 225 feet wide (MLW) and has a depth of 19 feet at mean low water level. The flow velocity through the inlet does not exceed 1 fps.

The intake screenwell is divided into six equal bays. Each bay contains a 6-inch-spaced trash rack, a vertical traveling water screen, a deicing air bubbler and a vertical wet pit circulating water pump. Two features incorporated into the screenwell were designed to reduce fish impingement (Figure 2-2). First, the traveling screens are installed relatively flush with the face of the intake structure and the trash racks are installed approximately 16 feet upstream. This arrangement provides a lateral passageway between the racks and the screens to enable fish approaching the screen to escape through side trash rack ports.

Second, a plenum area between the traveling screens and the pump bay helps reduce the approach velocities to the screens during partial pump operation, since flow can be withdrawn through all the six screens.

The flow rates and resulting velocities for all modes of operation are given in Table 2-1. The general mode of operation is two pumps throttled during the months of January through May and September through December and two pumps unthrottled during June, July, and August.

The average design approach velocity (3 pump operation per unit) is 0.55 fps to the trash racks and 0.66 fps to the traveling screens (MLW). Since Bowline Pond is subject to tidal maximum fluctuations of 8.75 feet, velocities vary according to the tidal cycle. The range of screen approach velocities is therefore from 0.56 fps (HW) to 0.77 fps (LLW). At mean water, the water depth in the screenwell is approximately 27 feet. The tidal fluctuations in the Hudson River are transmitted to the vicinity of the intake structure through the inlet of the pond. However,

TABLE 2-1

POSSIBLE FLOW RATES AND VELOCITIES

BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

Water Elev.	Pump Operating and Total Flow per Unit, gpm	Approach Velocities, fps	
		Bar Racks	Screens
Mean Water Elev. 0.00	3 - 384,000	0.55	0.66
	2 - 316,000	0.45	0.54
	1 - 185,000	0.27	0.34
Mean Low Water Elev. -1.75	3 - 384,000	0.59	0.70
	2 - 316,000	0.48	0.58
	1 - 185,000	0.29	0.36
Low Low Water Elev. -4.00	3 - 384,000	0.65	0.77
	2 - 316,000	0.55	0.64
	1 - 185,000	0.31	0.40
Mean Water Elev. 0.00	2 - 257,000 Throttled Condition	0.37	0.44
Mean Low Water Elev. -1.75	2 - 257,000 Throttled Condition	0.39	0.47
Low Low Water Elev. -4.00	2 - 257,000 Throttled Condition	0.43	0.53

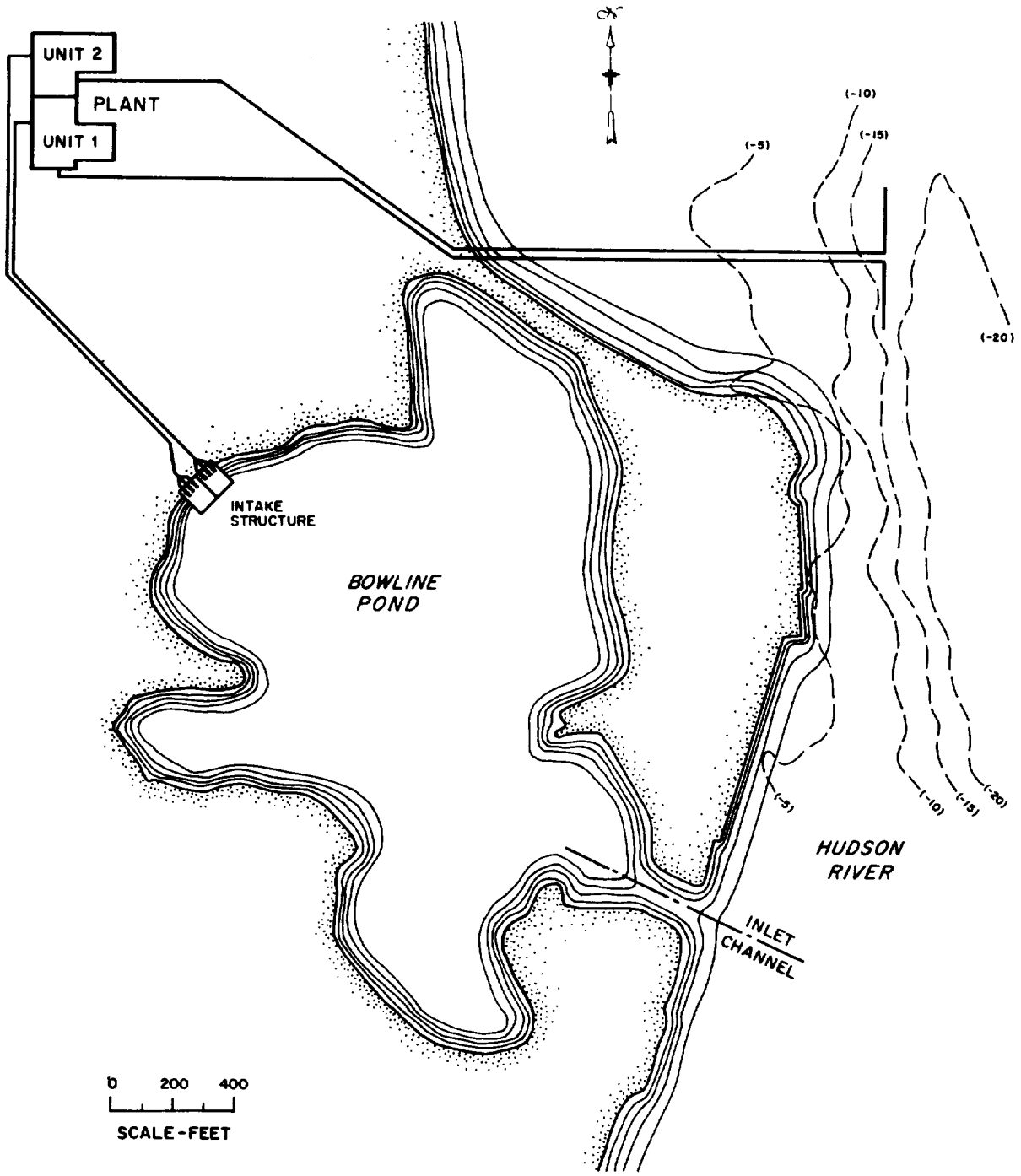


FIGURE 2-1

GENERAL PLAN
CIRCULATING WATER SYSTEM

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

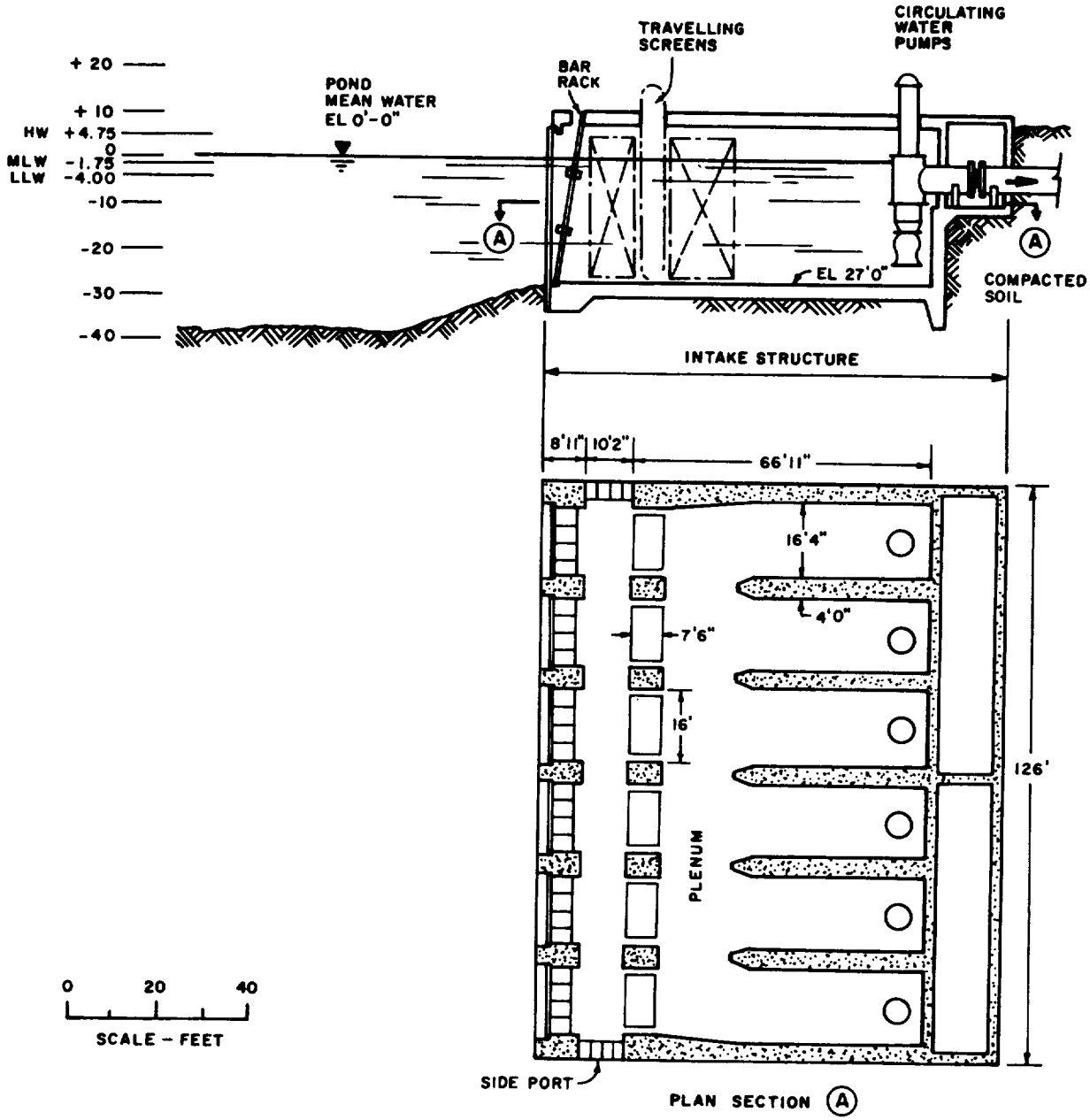


FIGURE 2-2

CIRCULATING WATER INTAKE STRUCTURE (SECTION AND PROFILE)

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

the tidal currents in the Hudson River are dampened due to the presence of the pond, which results in uni-directional current flow from the inlet at the river to the intake structure.

Each traveling screen is 14 feet wide by 38 feet high and consists of 3/8-inch-mesh wire cloth. For cleaning, the six screens are rotated and washed with approximately 60-psi water pressure (125 psi design) spray nozzles located within the screen housings on the operating deck. Debris is washed into a common trough leading to a trash basket for ultimate removal. Normally, the screens are operated intermittently in summer and continuously in winter. Additional spray nozzles using up to a maximum of 30-psi water pressure are also used to remove fish from the screens.

As a result of fish impingement experienced at Bowline Point, an additional feature was installed in the intake screenwell. In order to return fish which are washed from the screens during cleaning to Bowline Pond, a 12-inch-diameter pipe was connected to the trash trough. This pipe transports fish to a submerged discharge point on the north side of the screenwell. A weir within the trash trough segregates fish from floating debris. The effectiveness of this design in protecting fish is discussed in Section 3.

SECTION 3

IMPINGEMENT EXPERIENCE AT BOWLINE POINT GENERATING STATION

3.1 INTRODUCTION

Lawler, Matusky & Skelly Engineers (LMS) has been conducting impingement monitoring studies at the Bowline Point Generating Station since December 1972. These studies have been designed to identify species composition, abundance and biomass, seasonal cycle, and the estimated total annual number of fish impinged on the traveling water screens. In addition, length-frequency, condition, and survival of impinged fish have been determined for selected species. Since Unit 1 became operational in September 1972 and Unit 2 in May 1974, a comparison has also been made between impingement rates during one-unit and two-unit operation.

The following is a brief summary of the results of impingement monitoring studies conducted in 1974 and 1975, as discussed in detail in separate reports (LMS 1975, 1976). Additional information on impingement studies conducted prior to 1974 is presented in an earlier report (LMS 1974).

3.2 IMPINGEMENT

With the exception of January through April 1974, impingement monitoring was conducted weekly during 1974 and 1975. Samples were collected over a 24-hour period each week at intervals of 2, 4, 6 and 12 hours. During long-term survival studies, samples were collected from both the trash trough and the fish discharge pipe. This pipe was installed to return impinged fish to Bowline Pond on the north side of the intake structure.

A comparison of one-unit operation (June 1973 – May 1974) to two-unit operation (June 1974 – May 1975) indicated that species composition remained similar under both operating conditions. A total of 40 species were identified, with white perch (Morone americana) dominating impingement samples in both years. The seasonal occurrence of fish was similar in both years, with important species occurring as follows:

Species	Seasonal Occurrence
White perch (Morone americana)	late fall to May
Striped bass (Morone saxatilis)	throughout winter to April
Alewife (Alosa pseudoharengus)	late summer and early fall
Blueback herring (Alosa aestivalis)	October and November

Although the fish impingement rate has been highly variable during sampling, a general trend has been identified: impingement is low in the summer, increases during the fall to a peak from January through April and then decreases in May. White perch was

the most abundant species collected during one-unit and two-unit operation, comprising 56 and 62 percent of the total impingement, respectively. Other species occurring in abundance included striped bass, Atlantic tomcod (Microgadus tomcod), alewife, blueback herring, hogchocker (Trinectes maculatus), and rainbow smelt (Osmerus mordax). For both one- and two-unit operation, length-frequency data indicates that the majority of individuals impinged were young-of-the-year.

On the basis of sampling efforts at Bowline Point, LMS (1975) has identified several factors which may affect impingement, namely, abundance and distribution of fishes, intake velocity, and the topography of Bowline Pond. For the most part, the evaluation of the effect of these factors on impingement is, at this time, based on somewhat limited data. However, the cause and effect relationships which have been hypothesized by LMS offer information which is useful in developing methods for reducing impingement at Bowline Point.

Since Haverstraw Bay, on which Bowline Pond is located, is known to be a nursery area for juvenile fishes, it would be expected that these fishes would appear in abundance in the area at different times (depending upon the life histories of each species) and would, therefore, be susceptible to impingement. Since the majority of the fish impinged at Bowline Point are young-of-the-year, this factor would appear to be true. Therefore, distribution certainly affects impingement. It might also be expected that species abundance would affect impingement rates. However, this was not found to be true (LMS 1975). Instead, an increase in impingement of striped bass and white perch during two-unit operation occurred when the abundance of these species in the river was declining. It was therefore concluded that abundance was not a key factor in impingement.

The increase in intake flow and, therefore, velocity which occurred when Unit 2 began operation could be a factor in increased impingement. Preliminary studies conducted by LMS (1975) indicate that this may, in part, be true. In November 1973, marked live fish were released at two different locations: 10 feet upstream of the trash racks, and between the racks and the traveling screens. The experiments were conducted under one-unit and two-unit flow conditions. Of the fish released upstream of the trash racks, 9.7 and 2.0 percent were impinged under one-unit and two-unit operation, respectively. Of the fish released between the racks and screens, 18.4 and 36.5 percent were impinged under the same conditions. Although preliminary, these data indicate that the area of influence of intake velocity is localized but could be an important factor within the localized area.

LMS (1975) has proposed a possible explanation for seasonal impingement variability which relates to the behavior of fish in the Bowline Point area. Fathometric surveys indicate that fishes

within the pond exhibit depth selectivity during the months of colder water temperatures. If fish within the river exhibit the same selectivity, then it is possible that recruitment into the pond is limited during these months since the area around the dredged pond inlet is shallow and may act as a barrier to fish movement. High impingement during January could be due to movement of fishes into the pond in the fall. With limited recruitment during winter, impingement would decrease due to cropping. The impingement peak in April would then coincide with renewed activity of fish in the river (no depth selectivity) as a result of increasing water temperatures. Although this idea is based on limited data, it does offer a possible explanation of the seasonal impingement trend at Bowline Point.

In addition to impingement monitoring, studies were conducted during 1974 and 1975 to determine impingement survival and the degree to which reimpingement of fish returned to Bowline Pond occurs. Results of initial survival studies with continuous traveling screen operation are summarized in Table 3-1. In general, fish of the genus Alosa showed very low survival, hogchoker showed very high survival, and striped bass, white perch, and tomcod showed intermediate survival. Initial survival of striped bass and white perch was positively correlated with chloride concentration. The percentage of fish classified as unimpaired when collected from the traveling screens was also determined and is shown on Table 3-1.

Although highly variable, the results of long-term survival studies indicate that white perch, striped bass, and tomcod are capable of surviving impingement at certain times. Since the screening system at Bowline Point was not designed for handling live fish, the survival rates could seemingly be improved through modifications, as discussed in Section 4. It is also possible that much of the observed mortality resulted from experimental procedures such as sluicing and handling.

Results of reimpingement studies, using tagged fish, indicate that recirculation of impinged fish which are returned to Bowline Pond does occur to a relatively large degree. Such reimpingement not only acts to increase the impingement potential of the screens, but may also affect the survival of impinged fish. Fish which are impinged repeatedly will experience higher mortality. However, if fish were impinged only once and then removed from the pond, the pond abundance, and consequently impingement potential, would decrease while survival would increase. This concept is discussed further in Section 4.

Although the effect of fish cropping resulting from impingement mortality at Bowline Point has not been defined, Orange and Rockland had taken several measures to reduce fish losses due to plant operation. First, as previously mentioned, a pipe was connected to the trash trough to return impinged fish to Bowline Pond. In conjunction with this effort, the screenwash spray

TABLE 3-1

SUMMARY OF INITIAL SURVIVAL OF IMPINGED FISH - 1974[1]

BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

	Striped Bass	White Perch	Atlantic Tomcod	Alosa sp.	Hogchoker
No. of Fish Sampled	6,714	20,882	689	2,770	832
Range % Alive[2]	4 to 96%	3 to 99%	49 to 100%	0-32%	97 to 100%
Mean % Alive	69.8%	55%	65%	13.4%	98%
Range % Unimpaired	3 to 96%	2.6 to 99%	23.6 to 100%	0 to 25%	97 to 100%
Mean % Unimpaired	35.6%	22.1%	44.7%	11%	98%
Correlation with Chlorides[3]	Yes	Yes	-	-	-
Correlation with Temperature[4]	No	No	-	-	-

[1]Based on LMS, April 1976

[2]Range and mean percentages of alive and unimpaired fish based on catches of more than 25 fish per day.

[3]1974 range in chloride concentration during impingement sampling days = 11.2 - 1678.9 mg/liter.

[4]1974 range in water temperature during impingement sampling = 0.1° - 26.8°C.

pressure was reduced to 30 psi to create a more gentle washing action and the traveling screens were run continuously. Second, during the winter months, the plant is normally run with two pumps in operation, thereby reducing the velocity through the traveling screens. In this way, fish with limited swimming ability due to cold water temperatures are more capable of avoiding impingement. Finally, during 1976, a 1/2-inch-mesh net was installed around the intake structure to prevent fish passage. During the time in which this net was in place, impingement was reduced. later in the year.

The studies conducted at Bowline Point to date in conjunction with conceptual design studies, indicate that there are a number of potential concepts for reducing fish impingement. Conceptual schemes for accomplishing this objective are presented in Section 4.

SECTION 4

ALTERNATIVE INTAKE DESIGN MODIFICATIONS

4.1 INTRODUCTION

The six alternative intake design modifications which have been selected for possible application at Bowline Point would each incorporate one of three concepts of fish protection. Schemes 1 through 4 would operate on the basis of fish diversion with angled and inclined plane screens. Scheme 5 would involve the collection and gentle removal of fish from modified vertical traveling screens. Scheme 6 would operate on the principle of fish deterrence at the inlet to Bowline Pond. The schemes have been designed to return fish from Bowline Pond to the Hudson River (Schemes 1–5) or to prevent their entry into the pond altogether (Scheme 6).

The fish protection devices proposed for possible application at Bowline Point were selected on the basis of their engineering practicality and their potential for biological effectiveness. Engineering considerations included the past operating experience of a device, the practicality of installing such a device at Bowline Point, and the potential for operational and maintenance problems. Biological considerations included the past experience of a device relative to its effectiveness in reducing fish impingement at other sites and its potential for effectiveness with Hudson River species.

A description of each of the fish protection schemes developed for possible application at Bowline Point is given below. The schemes are grouped under the three categories previously mentioned: fish diversion, fish collection/removal, and fish deterrent concepts. Preceding the description of the various schemes in each category, a general discussion of the biological rationale for selecting certain devices and eliminating others is presented. In addition, since Schemes 1 through 5 require the incorporation of a fish bypass and transportation system to return collected fish to the Hudson River, a separate section addresses several methods for addressing this requirement.

4.2 FISH DIVERSION CONCEPTS (Schemes 1 through 4)

4.2.1 Biological Considerations

Research related to the protection of fish at water intakes and diversions has been ongoing for many years. Early work focused on the problem of allowing the free passage of upstream and downstream migrants around hydroelectric facilities, particularly in the Pacific Northwest. As a result of these efforts, a number of fish diversion devices have been evaluated; many of these have been applied with variable success.

With the growth of fossil-fueled and nuclear generating stations, which can require the withdrawal of large quantities of water for cooling purposes, concern has more recently been expressed over the loss of aquatic organisms entrained in the flow entering these facilities.

In an attempt to mitigate fish impingement losses at power plant intakes, researchers have commonly applied "state-of-the-art" technology. Since much of the available technology was developed to protect fishes with life histories and behavioral characteristics different than those at many power plants, these attempts have often been limited in success. Therefore, in evaluating the potential effectiveness of a device proven effective with certain fishes for application at a different site, consideration must be given to species-specific differences which might cause the device to be effective at one site and ineffective at another. One of the most effective approaches to ensuring that a device will be successful in reducing impingement losses at a particular site is to conduct model or prototype studies to test the device with the species of concern. This approach is now being used with increasing frequency. As a result, several diversion devices have been developed which appear to have potential for general application due to their proven effectiveness with a wide variety of fish species.

It is on the basis of this recent experience that flush-mounted, angled, vertical traveling screens and inclined plane traveling screens leading to bypasses have been selected for possible application at Bowline Point. It is not the intent of this report to describe all of the diversion devices which were not considered, as this information is readily available in other publications (EPA 1976; Lake Michigan Intake Committee 1973; Schuler and Larson 1974; Sonnichsen et al 1973; Stone & Webster 1975; Clay 1961; Mayo, James, and Congleton 1972; Riesbol and Gear 1972). Instead, since all physical screening devices which could be applied for fish diversion are similar in concept, the rationale for not selecting them for application at Bowline Point is discussed in general below. Following this discussion, a more detailed discussion on angled vertical and inclined plane screens is given.

Other than the two screens selected for potential application at Bowline Point, there are seven types of screens which are commercially available and could be considered for fish diversion: conventional vertical traveling screens, fixed screens, double-entry single-exit vertical traveling screens, single-entry double exit vertical traveling screens, horizontal traveling screens, vertical revolving drum screens, and horizontal revolving drum screens.

Conventional vertical traveling screens were not considered appropriate for fish diversion due to the presence of sealing plates on both sides which act as an obstruction to free fish passage. In addition, the individual baskets comprising the screen are vertically angled and offset thus creating a screening surface which is not flush. These factors make it difficult to construct an effective fish bypass, i.e., one which is free of obstructions that might cause avoidance. The flush-mounted, vertical traveling screen selected for potential application is a modification of the conventional screen, as discussed later.

Fixed screens were not considered practical for application at Bowline Point because of a high potential for clogging that requires tedious manual cleaning. Biologically, fixed screens offer no advantage over flush-mounted traveling screens.

Double-entry single-exit and single-entry double-exit vertical traveling screens could be modified for fish diversion. However, to date, they have not been evaluated for such an application. Biological and hydraulic testing would be required to provide adequate approach flow patterns and a fish bypass before these screens can be utilized for fish diversion.

After extensive testing, a horizontal traveling screen has been developed for fish diversion (Farr and Prentice 1973). However, two critical drawbacks make this screen impractical for use at large power plant intakes at this time. First, the screen is effective only where the water depth does not exceed 10 feet. Secondly, it is generally effective only where the water level is relatively constant. Excessive depth and tidal fluctuations at Bowline Point make this screen impractical.

Vertical and horizontal revolving drum screens have been conceptually considered for fish guidance at power plant intakes. However, their potential biological effectiveness and engineering practicality for such an application have not been investigated. There are, therefore, no known operating drum screens designed for fish guidance at power plants (EPA 1976).

In addition to the screens discussed above which utilize wire mesh cloth or perforated metal plates as a screening medium, a louver system has been developed which has been proven to be highly effective in guiding fish to a bypass. (Stone & Webster 1975; Taft et al 1976; Schuler and Larson 1974). The system

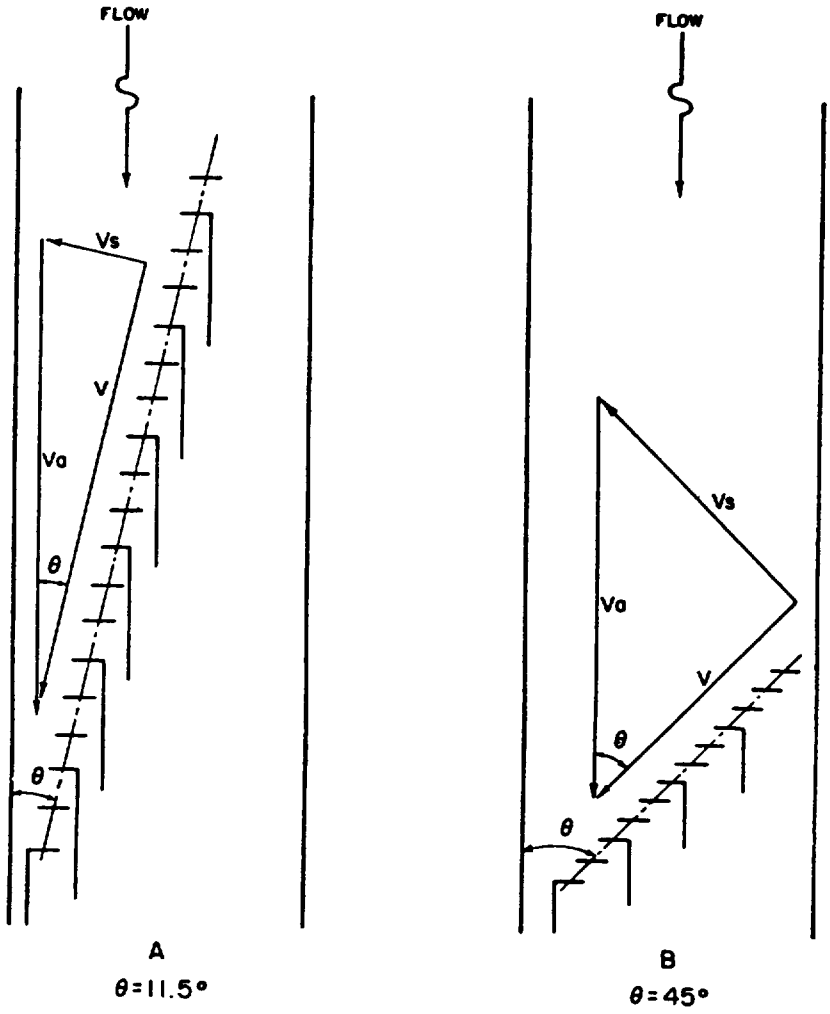
consists of evenly spaced vertical bars set in an array which is angled to the approaching flow and leads to a bypass (Figure 4.2-1). Such an arrangement creates an area of turbulence along the louver array which fish avoid. This avoidance response, in conjunction with a downstream flow component, eventually directs fish to the bypass. While this system has been proven effective with many fish species, including Hudson River fishes (Taft et al 1976), it was initially developed primarily for fish diversion at facilities which do not require the fine screening necessary at power plant intakes. Therefore, for power plant application, conventional traveling screens are required to collect debris and fish which pass through the louver system. The extra cost associated with installing louvers with conventional backup screens is not considered warranted at Bowline Point since the angled, flush-mounted screen described later has been shown to be more effective than louvers and acts as both a screening medium and diversion device.

The above discussion describes the rationale by which various diversion devices were eliminated from consideration for possible application at Bowline Point. The following discussion describes the basis on which angled, flush-mounted traveling screens and inclined plane screens were selected. This is a general discussion only; these devices are described in more detail in the discussion of each alternative scheme incorporating these devices.

Angled, Flush-mounted, Traveling Screens

Three research programs have been conducted to evaluate the potential of an angled screen, leading to a bypass, for effectively diverting fish and thereby minimizing impingement at power plant intakes. The first evaluation was conducted by Ichthyological Associates, Inc. for the Southern California Edison San Onofre Station (Schuler 1973; Schuler and Larson 1974). In this study, 5/8-inch-mesh screens were not found to be acceptable due to poor-to-fair guidance (0 to 70 percent) of the northern anchovy (Engraulis mordax), a primary test species. Moderate-to-good guidance (60 to 90 percent) of other test species was obtained with a screen set at 45 degrees to the approach flow, an approach velocity of 2.0 fps, and a bypass velocity of 1.5 to 4.0 fps (higher efficiencies corresponded to higher bypass velocities). This was also the best setting for anchovies, which were guided with 30 to 70 percent efficiency.

The angled screen was not considered further because of the large quantity of bypass flow required to yield good guidance efficiences. However, design limitations at the San Onofre Station permitted only one approach velocity (2 fps) to be tested, this velocity being the minimum possible. Therefore, it could not be concluded from the San Onofre studies that angled



Va = Approach velocity of flow in feet per second
Vs = Swimming speed of fish in feet per second
V = Resultant movement of fish in feet per second
θ = Angle of the line of louvers

(BATES, LOGAN & PESONEN 1960)

FIGURE 4.2-1

RANGE OF ANGLES IN LINES OF LOUVERS TESTED, AND VECTORS OF FORCE IN FLOW AND FISH MOVEMENT

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

screens at other sites would not be effective. It is possible that other species would guide well along angled screens under different conditions, particularly lower velocities and smaller screen mesh size.

Later studies by Stone & Webster Engineering Corporation (S&W) have shown that angled screens can be effective when properly applied. The S&W studies were conducted for a number of utilities operating large power plants on Lake Ontario and the Hudson River (Taft et al 1976). In studies with Lake Ontario species, the alewife being the primary species of concern, it was found that an angled screen, set at a 25-degree orientation to the flow at equal approach and bypass velocities ranging from 0.5 to 3.0 fps, is 100 percent effective in diverting fish to a 6-inch-wide bypass under the conditions tested (Stone & Webster 1976). As a result of these findings, a complete diversion and transportation system, incorporating pipe and pumping components, has been developed for returning fish safely to the lake.

Similar results were obtained by S&W during studies with Hudson River species, namely striped bass, white perch, and Atlantic tomcod. Under the same design and hydraulic conditions given above, the angled screen was found to be 100 percent effective in guiding these species to a 6-inch-wide bypass. Results of 1-week mortality studies showed that survival of bypassed fish was greater than 96 percent (Taft et al 1976).

Although angled screens have not been otherwise evaluated for power plant screenwell application, they have been utilized at several hydroelectric facilities for guiding upstream and downstream migrants. At the North Fork Project on the Clackamas River in Oregon, angled traveling screens are installed at two locations along a 2-mile-long fish ladder (Gunsolus and Eicher 1970). Downstream migrants, primarily chinook (Oncorhynchus tshawytscha) and coho (O. kisutch) salmon and steelhead trout (Salmo gairdneri), enter the fish ladder at the North Fork Dam via a downstream migrant channel. From this point, they can pass either through an open port in a gate system or can travel farther downstream where they are diverted by a set of angled screens and bypassed to the fish ladder. The width of the approach channel is 10 feet. The two traveling screens (0.14-inch-mesh, 16-gauge wire cloth) are each 11 feet wide and are set in tandem with a 2-foot-center pier between them. The screens are oriented at a 22-degree angle to the flow. The average depth of water in front of the screens is 30 feet. This arrangement has been found to be highly effective in diverting downstream migrants without impingement provided that the total screen flow did not exceed 500 cfs.

The second angled traveling screen installation is located just upstream of the fish ladder entrance (2 miles downstream of the North Fork Dam at the foot of the Cazadero Dam). This single screen is 7 feet wide and is set at a 45-degree angle to the

flow. The structure is utilized to separate downstream migrants from the ladder flow for subsequent introduction to a 5-mile-long pipeline. This pipeline transports the fish safely to a free-fall discharge just below the last dam in the complex, the River Mill Dam. Both angled traveling screen installations at the North Fork complex have been functioning effectively for nearly 15 years.

Experience at the Mayfield Dam on the Cowlitz River in Washington further substantiates the effectiveness of angled screens in guiding fish (Thompson and Paulik 1967).

Results of the above studies, particularly those with Hudson River species, clearly indicate that angled traveling screens offer a potentially effective method for reducing fish impingement losses at Bowline Point. Three schemes incorporating such a device are described in Section 4.2.2.

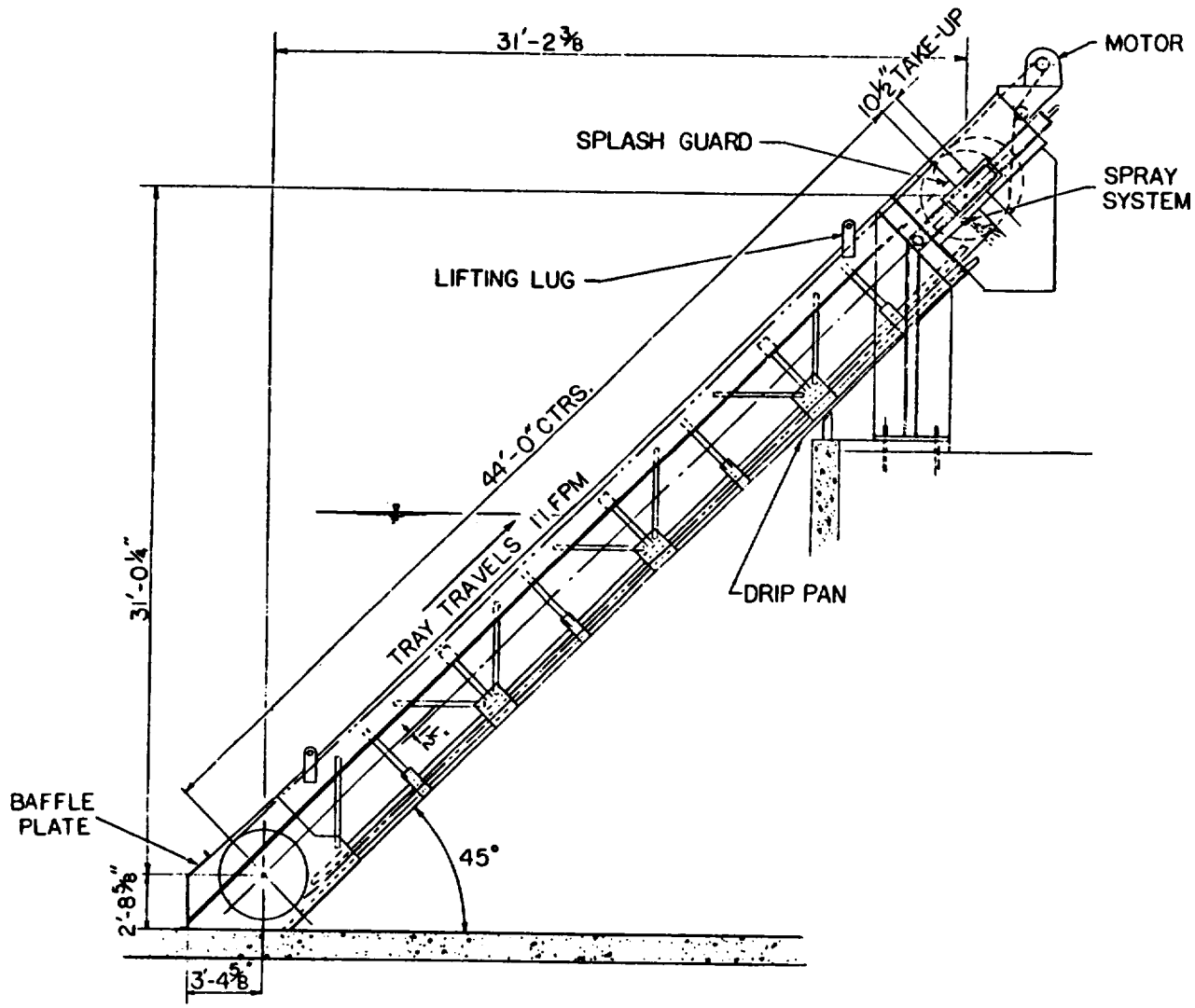
Inclined Plane Traveling Screens

Several types of inclined plane screens have been developed to date. The first is simply a conventional traveling screen inclined downstream at a small angle. This is used in areas of very heavy debris loading where the conventional vertical screen allows collected debris to fall back to the water during the wash cycle. By inclining the screen up to 12 degrees, debris is held down by the force of gravity until it can be removed into a collection trough. Larger angles have been used at some installations. Figure 4.2-2 shows a 45-degree inclined plane screen used at the intake of a lumber operation in Oregon for the removal of heavy debris. Because this type of inclined screen is essentially the same as the conventional type, it has the same environmental drawbacks. Fish must be impinged and carried out of water in order to be diverted.

Another type of inclined screen is shown on Figure 4.2-3. In this case, the screen is fixed and is placed nearly horizontal to the flow. An endless band of rotating brushes sweeps debris and fish across the screen face to a surface collecting area. Such a screen has been used in Canada to divert migratory salmon from a spawning channel with good results (Kupka 1966). However, there are two problems with this screen which limit its application. First, it is necessary to maintain a constant water level in the screen area in order that water always flows to the surface bypass. Second, in regions of high debris loading, such a screen could clog quickly.

Two other applications of an inclined plane screen have been tested in the Pacific Northwest with variable success (Clay 1961; Eicher 1960).

In addition to the above applications, Stone & Webster conducted two studies in which inclined plane screens (perforated plates)

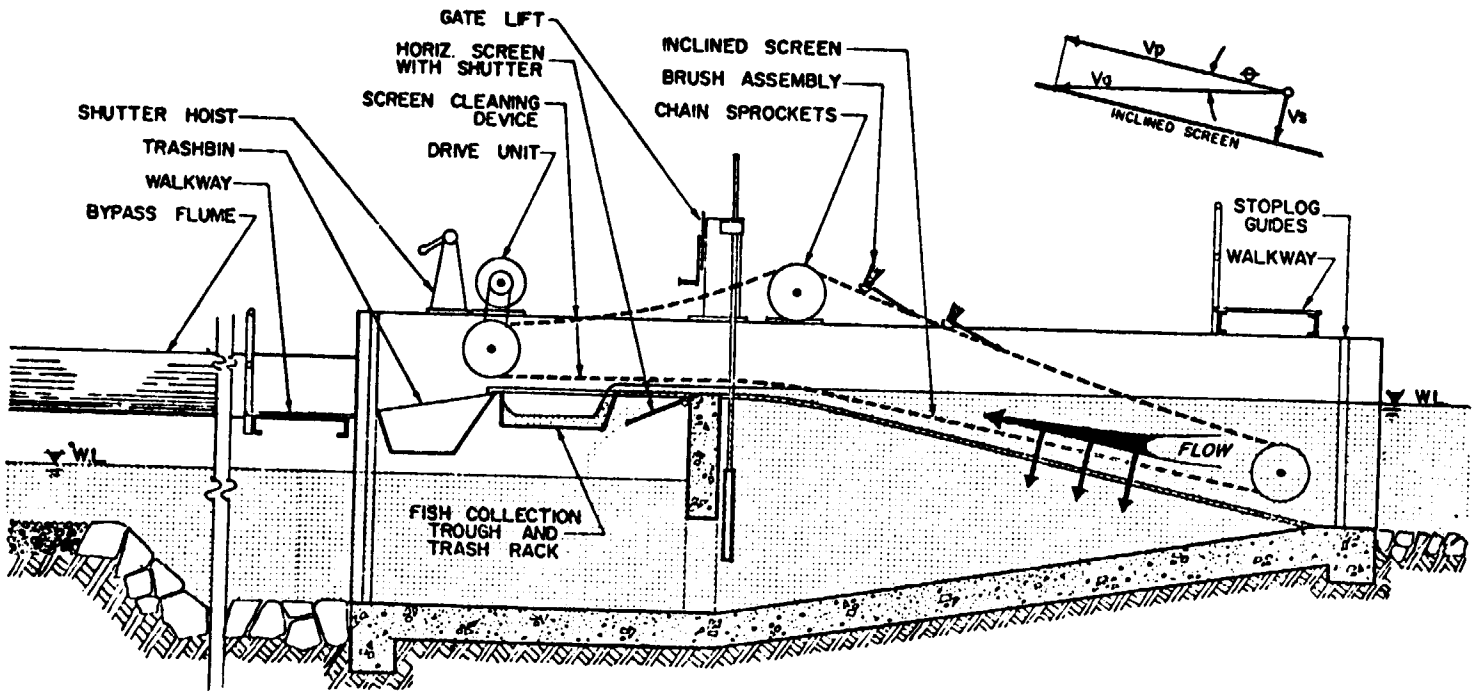


(COURTESY OF FMC CORPORATION - LINK-BELT)

FIGURE 4.2-2

45-DEGREE INCLINED PLANE SCREEN

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.



(KUPKA 1966)

0 1 2 3 4 5

SCALE-FEET

FIGURE 4.2-3

SECTION OF THE DOWNSTREAM MIGRANT DIVERSION STRUCTURE

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

were utilized to collect fish in a surface trough for easy removal. Although these inclined screens were used mainly to facilitate testing and were not an integral part of the study programs, they functioned very effectively in diverting alewives, striped bass, white perch, and tomcod vertically to a collection trough.

As in past studies, it was necessary to maintain a relatively constant overflow depth to achieve effective guidance. In the alewife test facility, this was accomplished by having the 1/8-mesh plate (42 percent open area) structure hinged at the bottom such that it could be adjusted according to water depth. In the other test facility, the inclined plate was fixed and the overflow depth was maintained by keeping a constant water depth in the facility (Figure 4.2-4).

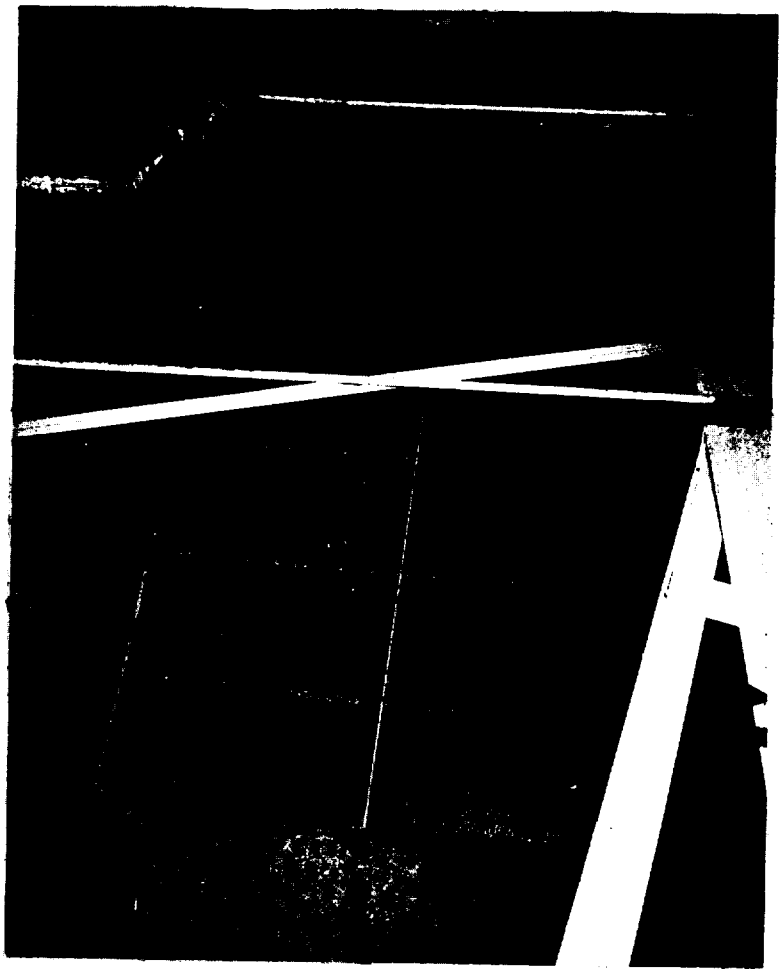
In both studies, it was found that fish easily guided up the perforated plate screen, even when set at a steep angle (alewives), and impingement was never observed.

The results of studies and applications of inclined plane screens to date indicate that this device offers a potentially effective solution to the problem of fish impingement at power plant intakes. Problems common to all systems developed to date are the difficulty of incorporating an effective bypass that functions with water level fluctuations, effective cleaning of the screen, and an overall mechanically reliable screen. Possible inclined plane screen and bypass arrangements are discussed in Section 4.2-3. If an adequate screen, together with an effective bypass can be designed, the system would certainly warrant further investigation.

4.2.2 Alternative Intake Designs Utilizing Angled, Flush-Mounted Traveling Screens

Based on the above information, S&W has developed three conceptual alternative schemes for incorporating angled traveling screens at Bowline Point. Although all three schemes involve the same concept of fish diversion, each has inherent advantages and disadvantages relative to the extent of modifications and construction required. The primary advantage of all schemes is that new screening structures can be constructed without shutting down the plant, as discussed below. Based on past experience, each scheme is designed with a screen angle of 25 degrees to the approach flow, an equal average approach and bypass velocity of 1.0 fps, and bypass widths of 1 foot (as required to prevent clogging in an area of heavy debris loading).

The schemes presented are conceptual only. Dimensions, distances and flows, where given, are preliminary and are included only to aid in the evaluation of the schemes.



NOTES:

(1) STUDIES CONDUCTED FOR CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
(2) PERFORATED PLATE: 16 GAUGE, 1/4-INCH MESH, 40% OPEN AREA

FIGURE 4.2-4

FIXED INCLINED PLANE PERFORATED PLATE UTILIZED TO COLLECT HUDSON RIVER SPECIES

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

Scheme 1 - Screen Arrangement Utilizing Existing Intake Structure With Angled Approach Channel

This scheme would involve angling of the approach flow to the existing intake structure such that the flow streamlines intersect the screens at an angle (close to 25 degrees or less) suitable for effectively guiding fish along a vertical screen array.

This scheme, as shown in Figure 4.2-5, consists of (a) a new trash rack structure located east of the existing intake structure; (b) an angled approach channel; (c) modification to the existing intake structure and existing traveling screens to permit the screens to be flush-mounted at the intake face surface; (d) a 1-foot-wide bypass and a bypass transition section; (e) a fish transport pipeline; and (f) a pumping unit to return the fish safely to the Hudson River.

To protect the fish bypasses from being clogged with debris, the new trash rack structure would be provided with 0.5-inch-thick bar racks with 3-inch-clear spacing and inclined at a 5 on 1 slope to provide better traction of the trash rake. A skimmer wall extending 2 feet below the low water level would be incorporated to keep ice and floating debris off the trash rack. A mechanically operated trash rake would lift the debris into a rail-mounted trash hopper. This hopper could then be emptied at the end of the rail line for ultimate disposal by truck. An air deicing bubbler would be placed on the footing of the rack structure to prevent icing and, thereby ensure effective operation of the trash rake.

The trash rack structure would be constructed of a reinforced concrete mat placed on pilings, reinforced concrete piers, and a reinforced concrete deck. Access to the structure would be via a short bridge from the shoreline. For construction of the trash rack structure, the area would be dredged to the proper elevation and a single-wall, braced, sheet-pile cofferdam would be driven around a rectangular area and dewatered to allow construction in the dry. Once construction is complete, the sheet pile cofferdam would be removed by burning it off under water at the top of the base mat.

The angled approach channel would be enclosed by two rows of Galbestos siding supported on H-piles. The angle of the channel to the face of the existing intake structure would be 25 degrees. However, this angle, together with the location and length of the internal guide walls, would have to be verified by hydraulic model studies to ensure that the flow streamlines intersect the traveling screens at an angle of 25 degrees or less as required for effective fish guidance. Without the internal guide walls, it is probable that the flow in the channel would turn toward the

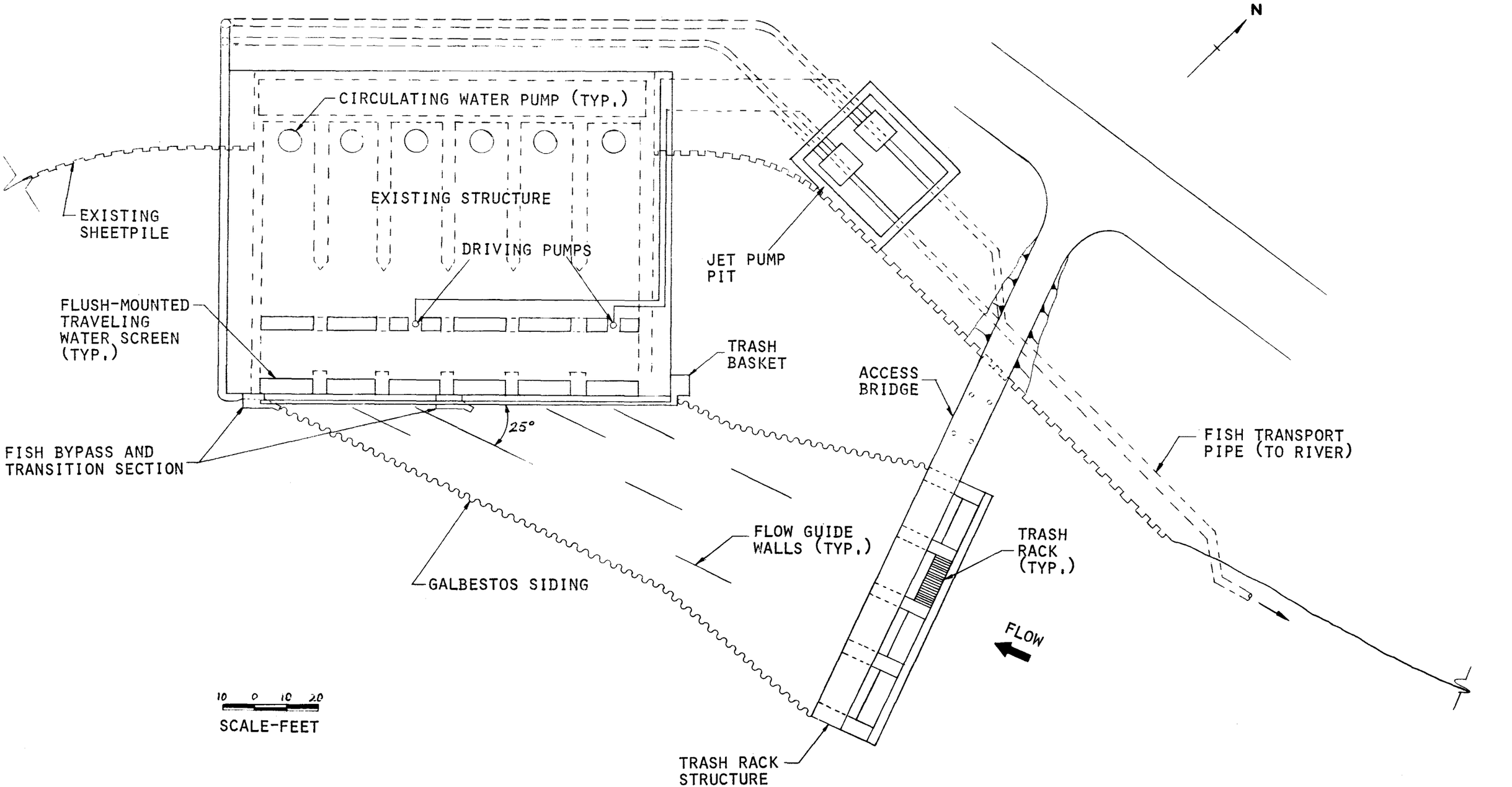


FIGURE 4.2-5

SCREEN ARRANGEMENT WITH ANGLED APPROACH CHANNEL

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

screens prematurely; that is, at some distance upstream from the screen face resulting in a normal approach flow to the screens.

The modification to the existing intake structure would consist of making alterations to the screens, moving them forward to the face of the intake and installing two fish bypasses and associated transition sections.

Modification of the existing screens would involve resetting the individual screen panels such that they are flush with the intake face, and removing the seal plates on each side of the screen. In order to prevent debris from passing under and around the screen which might result in jamming in the absence of seal plates, a special boot plate would be provided. The screen details in the foot area should be investigated and specified thoroughly for such an application. Details of the modified, flush-mounted screens are shown in Figure 4.2-6. Only five existing screens would be modified. A new (sixth) screen would be required to facilitate the modification and to allow screened water to flow at all times during this effort.

As already mentioned, the existing traveling screens would be moved to a position upstream of the existing trash racks one by one. The existing concrete piers would be extended slightly and fitted with guides to support the screens. A bulkhead would be fabricated and lowered into place downstream of the modified traveling screens to protect divers during underwater work. When work is proceeding on the screen modification and relocation in one bay, water would be withdrawn from the side ports or adjacent bays to supply the pump downstream of the bay. The existing trashracks, which have 6-inch spacing between bars, would be removed and would not be used. The intake deck would also be extended to incorporate a new sluiceway and trash collection basket for collection of debris washed from the screens. A deicing bubbler would also be incorporated in front of the screens. Finally, upon completion of construction, the two existing side ports would be sealed such that unscreened water would not enter the pump bays.

Because of the width of the intake structure (124 feet), two bypasses would be installed (one for each group of three screens) such that the distance which a particular fish has to guide prior to being bypassed is a maximum of 62 feet. This would reduce the chance that a fish would become fatigued and impinge on a screen. The entrance to the bypass located between the Unit 1 and Unit 2 screens would be bounded by a steel plate on one side and the pier supporting the last screen on the other side. The second bypass, located on the southwest corner of the intake, would be bounded by the end of the Galbestos siding (filled as necessary to create a flat surface) on one side and the screen support pier on the other.

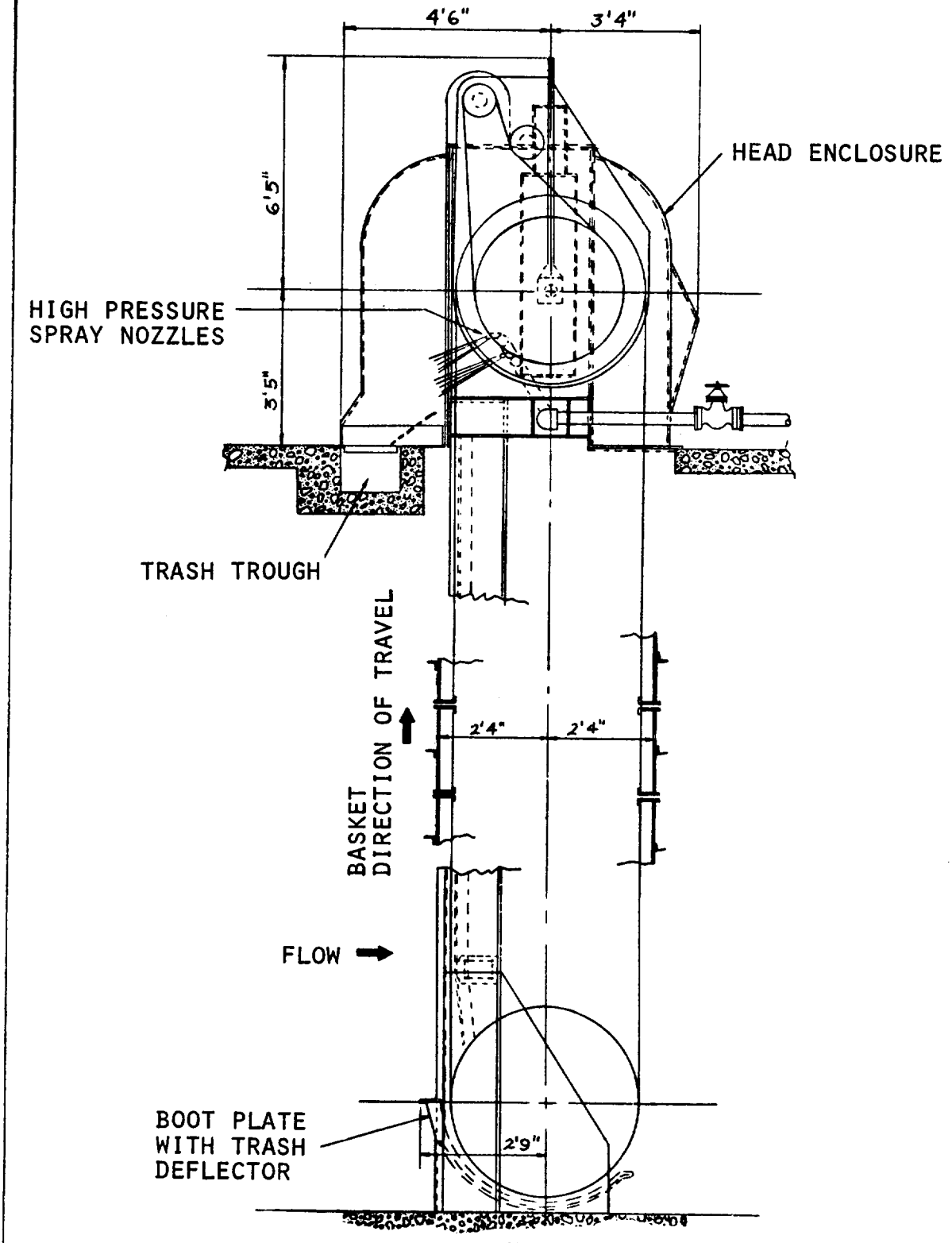


FIGURE 4.2-6

SIDE ELEVATION OF
FLUSH-MOUNTED TRAVELING SCREEN

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

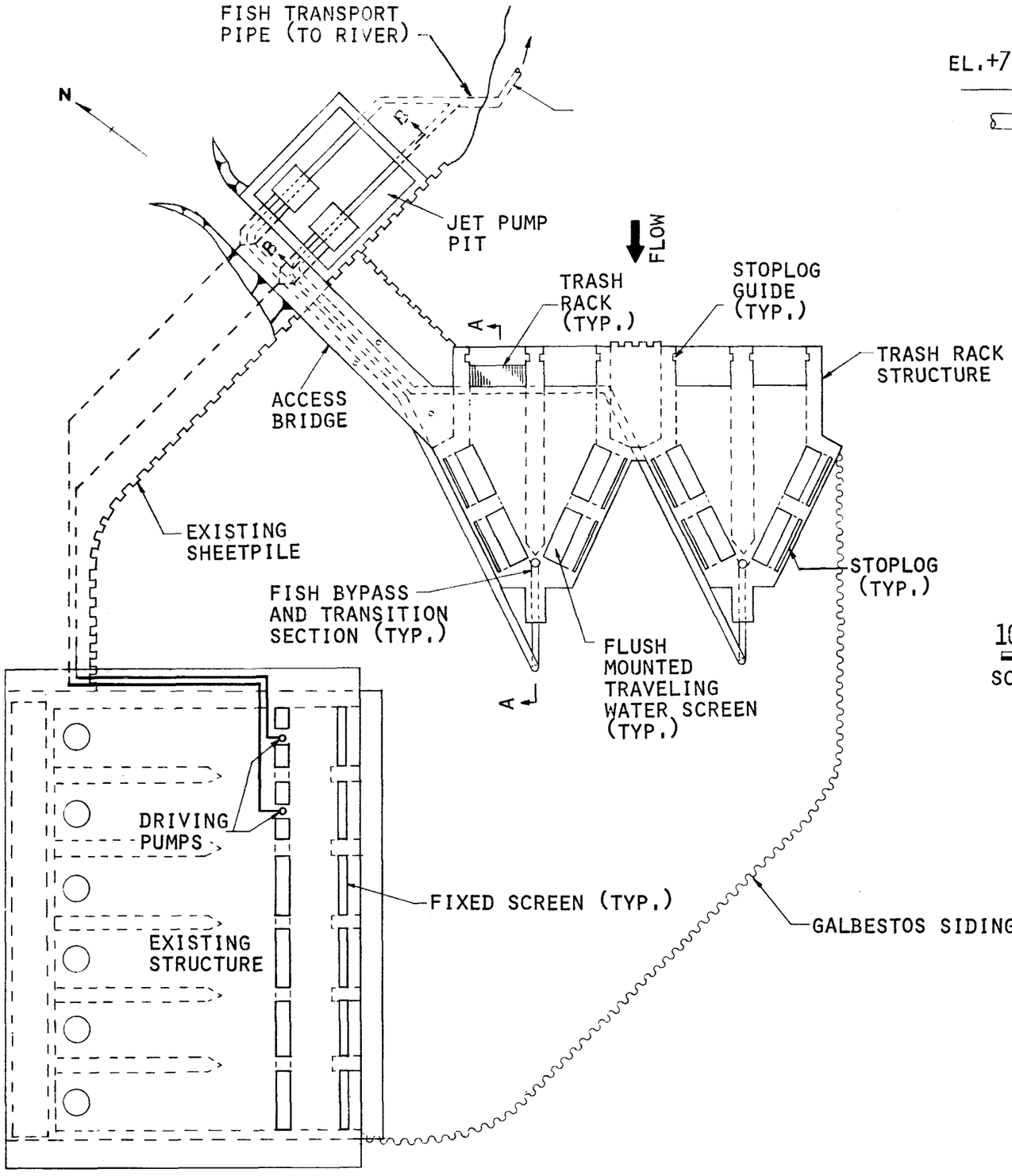
To ensure an equal distribution of flow into the two bypasses, each bypass would incorporate three transition sections which would direct the water into transport pipes. The transition sections could be shop fabricated out of steel plate and installed in the wet, thus ensuring minimum disturbance to the operation of the circulating water system and avoiding the use of cofferdams.

The three pipes exiting from the transition sections of each bypass would be manifolded into one larger pipe. The two bypass pipes would then carry the bypass flow to two jet pumps located in a pit north of the pumphouse. These two pumps would induce the suction flow in the bypasses and pipes. The driving flow for the jet pumps, described in further detail in Section 4.5-1, would be provided by two additional vertical turbine pumps mounted in the deck openings previously occupied by the traveling water screens. The required bypass flow would be approximately equal to the driving flow, based on the hydraulic characteristics of the jet pump and the fish transport system hydraulic losses. The total head of the driving pumps would be sufficient to provide adequate driving velocity. The location of the driving pumps, upstream of the circulating water pumps is not expected to affect the performance of these pumps. The two jet pump discharge pipes would be manifolded into one larger pipe which would convey bypassed fish back to the Hudson River. The discharge point for this pipe would be north of Bowline Pond between the river bank and the oil docking facility. The pipe would be laid and anchored along the shoreline of the pond under water of sufficient depth to ensure constant submergence and protection from icing, debris and watercraft. This method would reduce costly trenching, except for a short distance of 300-feet, and would also eliminate the need for priming of the pipeline.

Scheme 2 - Angled Screens with a Chevron Arrangement Located East of the Existing Intake Structure

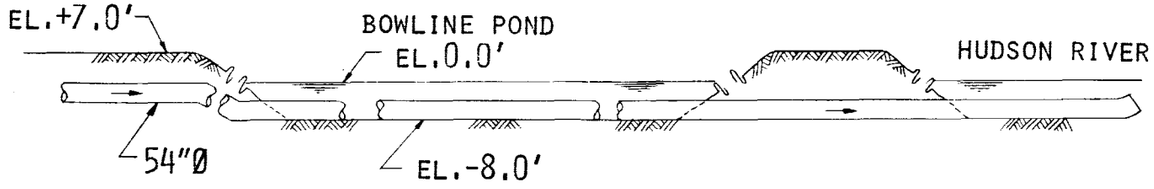
This scheme would consist of a combined trash rack and screen structure utilizing flush-mounted traveling screens in a chevron arrangement located approximately 100 feet east of the existing intake structure, as shown in Figure 4.2-7. This location was selected because of its close proximity to the shoreline, thus facilitating access, and because it is far enough from the existing intake to avoid excessive disturbances to the plant flow during construction.

To allow installation of the screen diversion structure in the dry, the construction area would be cofferdammed and dewatered. The trash rack structure and associated cleaning and deicing equipment would be similar to that described in Scheme 1. The screen diversion structure would consist of eight angled, flush-mounted traveling screens set in a chevron arrangement. Since the six existing screens in the present intake could be utilized after modification (previously described), only two new screens

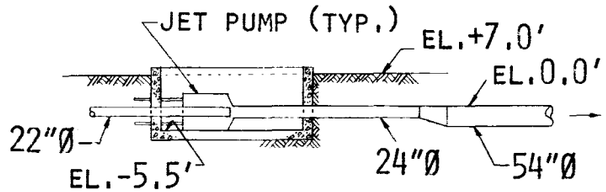


10 0 10 20

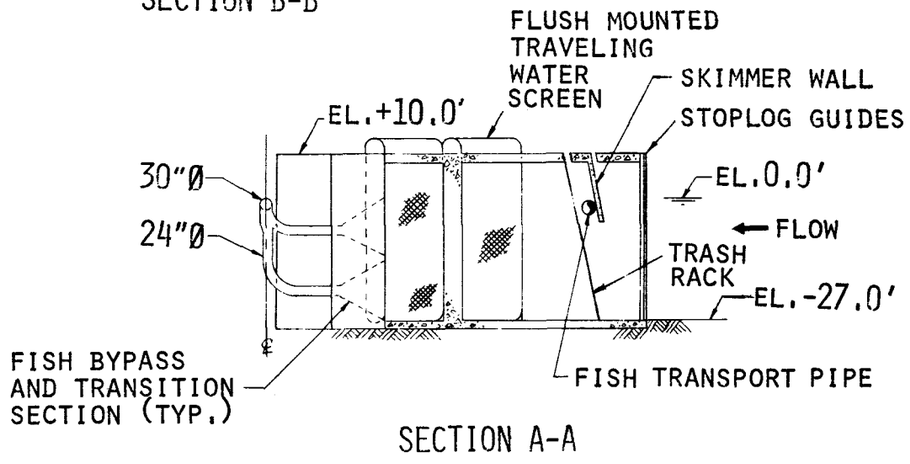
SCALE-FEET



FISH TRANSPORT PIPE TO RIVER



SECTION B-B



SECTION A-A

FIGURE 4.2-7

CHEVRON ARRANGEMENT
EAST OF EXISTING STRUCTURE

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

would be required. Four intake bays, each incorporating two angled screens, would be constructed. A concrete pier would separate each pair of screens. A detail of the chevron arrangement is shown in Figure 4.2-8.

A minimum distance of 20 feet would be provided between the trash racks and the beginning of the angled screens to ensure that the flow approaches the screens at the proper angle (approximately 25 degrees) for successful fish guidance.

The bypass, jet pump and transportation pipe system would be similar to that described for Scheme 1. However, only two transition sections would be required in each bypass to convey bypassed fish into pipes. Three transition sections were required for Scheme 1 in order to minimize their protrusion into the adjacent screen area. However, since this limitation would not exist in Scheme 2, the transitions could be longer, thereby achieving the same transition angle with only two sections. Access to each transition would be provided through a manhole located in the bypass entrance to allow for manual cleaning, if necessary.

Each transition would convey bypassed fish to a pipe. The two pipes in each bypass would then be manifolded into one larger pipe which would carry fish to the jet pump. The two pipes exiting the jet pumps would then be manifolded into one pipe in which fish would be transported back to the river (same discharge point as Scheme 1). The driving pumps arrangement is also similar to Scheme 1.

Following construction of the new screening diversion structure, the cofferdam would be removed so that water could pass through the screens. Fixed screens would replace the traveling screens in the existing screenwell structure to screen leaves or other debris falling into the approach channel. Galbestos siding supported by H-piling would then be installed in place to enclose the area between the new screens and the pumphouse. The only other modification to the existing intake would involve sealing the intake port on the southwest side wall so that unscreened water from the pond could not enter the pumphouse through this opening.

Scheme 3 - Angled Screens with a Chevron Arrangement Located in Front of Existing Intake Structure

This fish diversion scheme is the same as Scheme 2, as shown on Figure 4.2-9, except for the location of the diversion devices. Construction and operation would be similar. The new structure would be located 40 feet upstream of the existing structure such that disruption of the flow entering the pumphouse during construction would not result. A pile-supported bridge (trestle) would allow access from the shoreline to the new screening area.

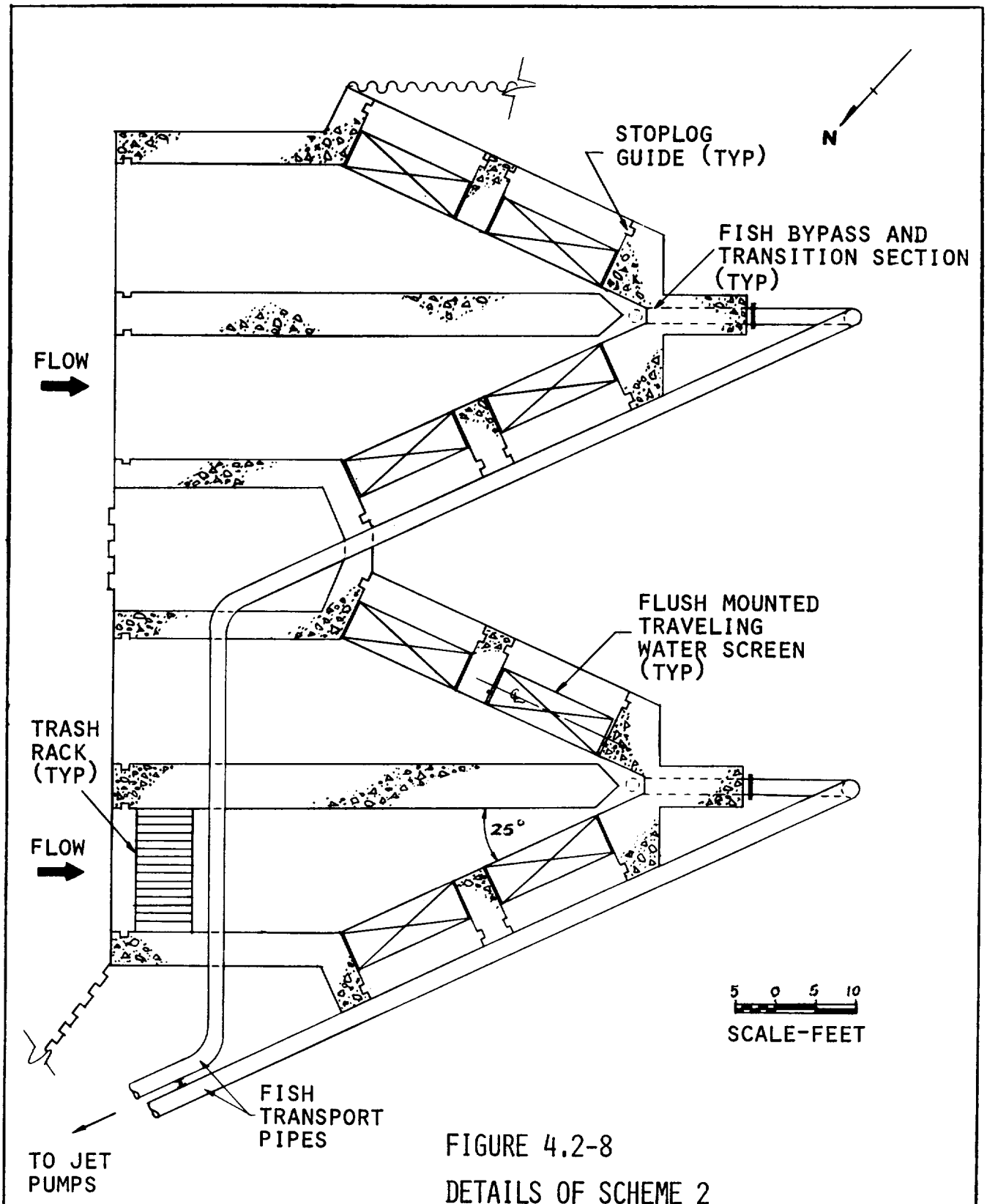


FIGURE 4.2-8

DETAILS OF SCHEME 2
ANGLED SCREEN STRUCTURE

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

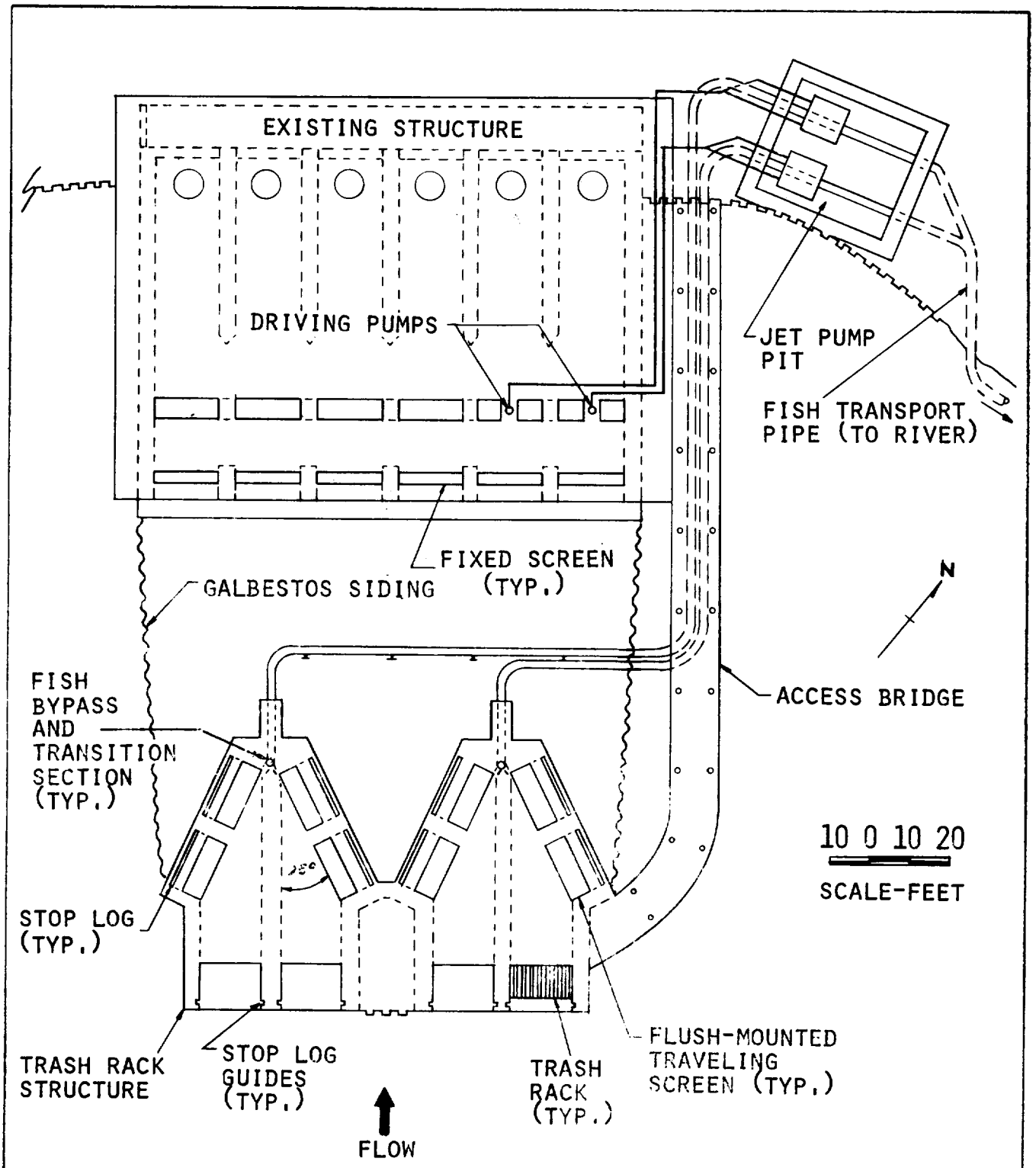


FIGURE 4.2-9

SCHEME 3 - CHEVRON ARRANGEMENT IN FRONT OF EXISTING STRUCTURE

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

The jet pumps inducing the bypass flow would be located in a pit north of the pumphouse.

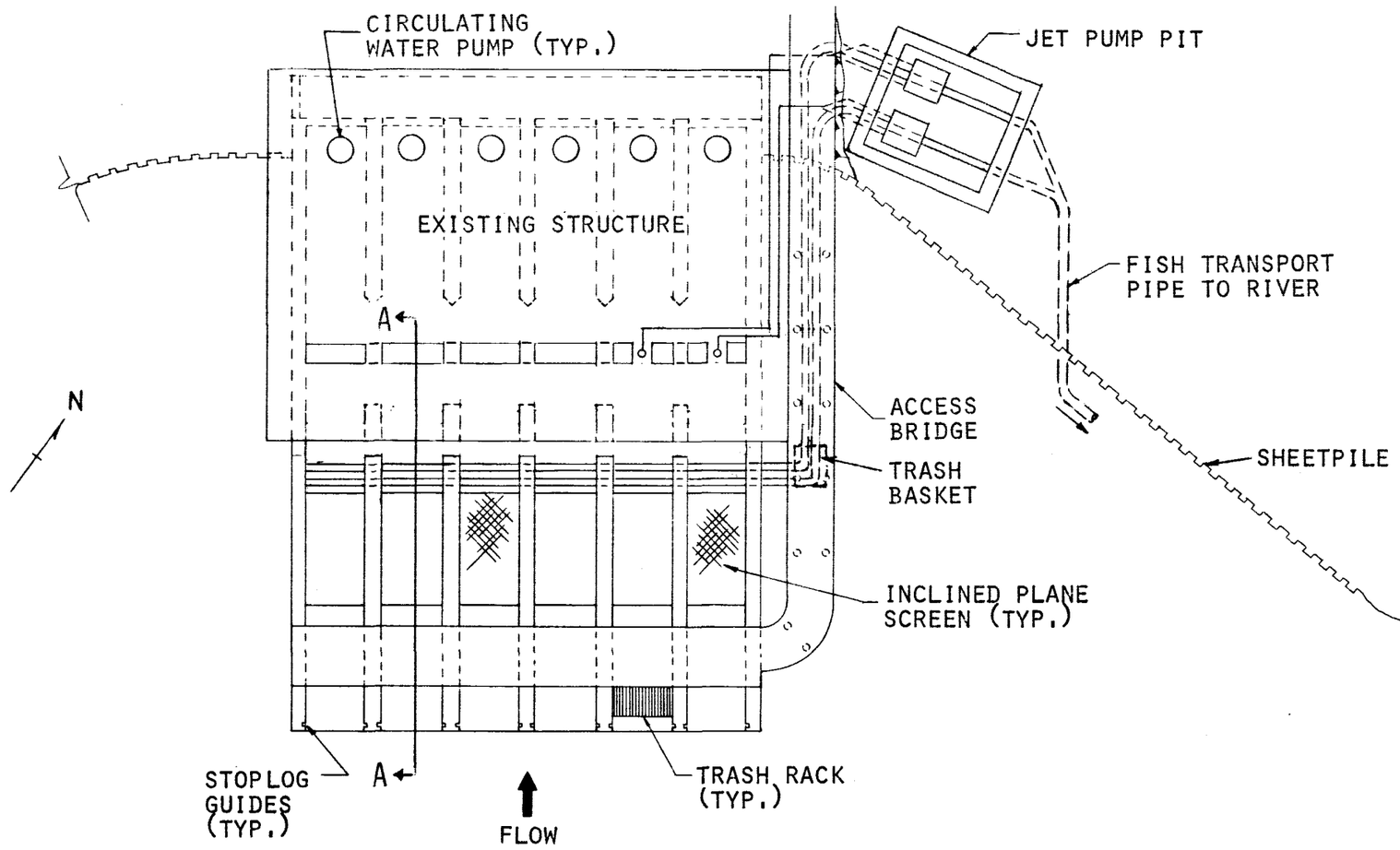
An advantage of both Schemes 2 and 3 is that one screen bay, consisting of two angled screens and a bypass, could be constructed for evaluation without having to construct the entire screening structure. In this way, the performance of the diversion device in either orientation could be determined relatively inexpensively at the site to verify that this concept is effective. This field experiment could be conducted by isolating one pump bay and connecting it with sheet pile walls to the new angled screen bay. Then, by operating the diversion device, using the existing conventional screens for comparison, the effectiveness of angled screens could be determined. If the angled screens prove effective, the remainder of either diversion structure could be installed. While it is believed that angled screens would be highly effective in diverting fish at Bowline Point, a field evaluation of this type would ensure the validity of this fish diversion concept, if such a verification is deemed desirable.

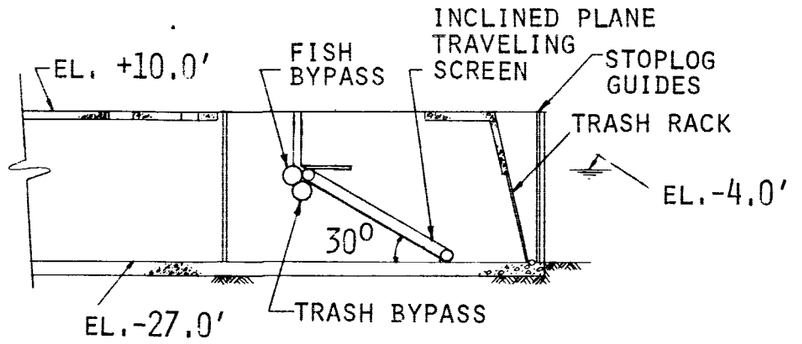
Although both Schemes 2 and 3 offer the potential for this relatively easy preliminary biological evaluation, construction would be somewhat more involved for Scheme 3 due to the distance of the structure from the shoreline.

4.2.3 Alternative Intake Design Utilizing Inclined Plane Screens (Scheme 4)

As discussed in Section 4.2.1, inclined plane traveling screens have not been utilized for fish diversion at power plant intakes to date. However, two screen manufacturers have recently developed inclined screens which could be effective in diverting fish to a surface bypass. Naturally, biological testing would be required to evaluate the effectiveness of these new designs prior to application. However, based on past research (Section 4.2.1), this concept appears to have potential for fish diversion. Should inclined plane screens prove effective, they would offer one major advantage over other diversion systems, particularly at sites where backfitting of a fish protection device to an existing intake is required. Since the screen operates in a similar manner as a conventional vertical traveling screen, except that it is inclined, it could be installed within existing concrete screen bays with relatively minor modifications. Where screenwell lengths are short, the concrete piers can be extended to incorporate the screens.

A scheme for incorporating inclined plane screens at Bowline Point is shown in Figure 4.2-10. While the exact design of the screen would have to be developed through detailed engineering design and biological studies, the basic features of the scheme are shown.





SECTION A-A

10 0 10 20

SCALE-FEET

FIGURE 4.2-10

INCLINED PLANE SCREEN

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

The scheme would consist of a new trash rack structure similar to that of Scheme 1, an inclined screen with separate fish and trash bypasses at the top, and pumping units to return bypassed fish to the river and trash to a trash basket.

Construction would be carried out by cofferdamming two bays at a time to allow work in the dry. This arrangement would not result in shutting down the plant, since the station flow would be withdrawn from the side ports and the adjacent, existing screened bays. Upon completion of construction in the two bays, the cofferdam would be removed to allow screened water to pass. The next set of bays would then be constructed in the same manner.

As mentioned above, inclined plane screens are similar to conventional traveling screens. However, they would be submerged at all water levels so that fish would not be carried by the screens but rather would guide along them. The success of the screens would depend on perfecting the transfer section between the top of the screen and the bypass. Fish return to the Hudson River and trash disposal would be similar to Scheme 1.

S&W has developed a jet pump that would pump fish safely back to the river. This jet pump would be connected to the enclosed fish bypass. S&W discussions with a leading screen designer indicate that possible details of the screen and bypass could be as shown in Figure 4.2-11.

CONCEPTUAL DESIGN OF SCREEN
COURTESY OF FMC CORPORATION

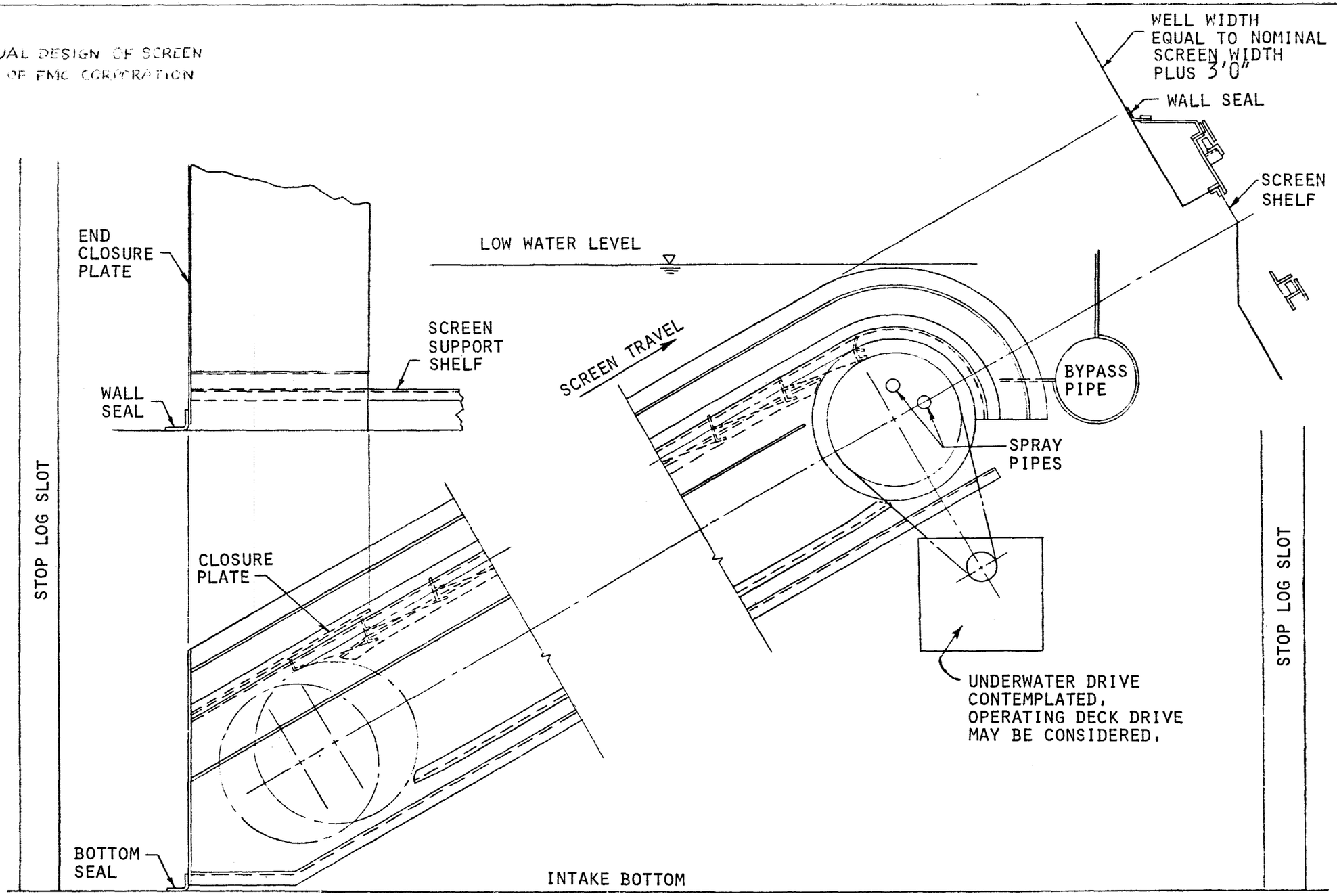


FIGURE 4.2-11

CONCEPTUAL ARRANGEMENT OF
SCREEN AND BYPASS

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

4.3 FISH COLLECTION AND REMOVAL CONCEPT

The second concept of fish protection considered for possible application at Bowline Point involves modifying the existing traveling screens such that fish could be impinged and removed with minimal stress and mortality. As previously discussed, conventional traveling screens can injure fish because of the multiple sources of stress to which the fish are exposed. First, where screen rotation is intermittent (the usual case), fish are subject to suffocation while impinged. Second, as fish are lifted free of the water surface, they are no longer held against the screen cloth and can, therefore, fall back into the water and reimpinge. Third, conventional screen wash systems operate at a high pressure (80 to 100 psi). The high velocity jets which clear the screens of debris can cause injury. In addition, the cleaning spray can cause impinged fish to be jetted into the screen housing resulting in additional injury. Finally, where attempts have been made at power plants to return live fish to their natural environment after impingement and removal, the discharge point is frequently close to the intake structure, a situation which can result in additional reimpingement.

A modified screen and spraywash system has been recently developed which eliminates some of the problems inherent in conventional screen designs. Since this modified system can be backfitted utilizing existing screens, it has obvious advantages over other systems that require construction of new structures. However, because the modified screens rely on the impingement of fish, this system can be employed only after it has been determined that the species of concern can withstand such handling. The following briefly describes the operating experience of modified traveling screens relative to biological effectiveness.

4.3.1 Biological Considerations

Only one power plant presently operates with a modified traveling screen and spraywash system. The two-unit nuclear facility is situated on a river and withdraws 3740 cfs of water for condenser cooling. Prior to installation of the modified screens, unscreened water was pumped from the river to a canal in which it flowed by gravity to the plant. Early operating experience showed that fish were being pumped into the canal and were ultimately impinged on the traveling screens located at the plant. To remedy this situation, eight modified screens were installed at the river to collect fish upstream of the pumps.

Screen modification involved bolting steel troughs on the trash lips of the conventional screen basket. The troughs extend approximately 5 inches from the screen face and are capable of maintaining a minimum water depth of 2 inches during screen rotation. This arrangement prevents fish from flipping off the screen and becoming reimpinged and also ensures that the fish are

in water as they are lifted to the point of release. Collected fish are carried over the head shaft sprocket and either fall into a collection trough or are gently washed into the trough with a low pressure jet (30 psi) on the back side of the screen. A second high pressure jet is located immediately below the low pressure jet for removal of debris into a separate trough. The low pressure wash feature of the modified screen prevents the damage caused by conventional spray wash systems.

To ensure maximum survival of impinged fish, the modified screens are operated continuously. Consequently, fish are not impinged for more than 2 minutes.

In almost 2 years of operation, the modified screens have shown a high degree of success in collecting fish with low mortality (telephone conversation between M. Brehmer, Virginia Electric Power Co. and E.P. Taft, S&W, Aug. 24, 1976). Short-term mortality studies show that, on the average, survival of approximately 50 freshwater and saltwater species is greater than 90 percent and can exceed 95 percent. Although additional maintenance is required for continuous screen operation, operational problems have been minimal. It appears, therefore, that the modified traveling screens have provided an effective means for minimizing fish impingement mortality at this site.

Although modified traveling screens have not been otherwise evaluated at power plant intakes, the experience to date indicates that such a concept may be effective in alleviating fish impingement problems. Various utilities are presently modifying existing screens or incorporating modified screens into the designs of new units. Due to this interest and the apparent potential for effective operation, several screen manufacturers now offer modified screens and spraywash systems as standard items for new and existing stations. The effectiveness of modified screens in preventing impingement mortality will naturally vary from site to site, depending on the fish species present. Therefore, it would be desirable to conduct laboratory or field studies with the species of concern prior to backfitting modified screens. In this way, the degree of effectiveness could be determined and the practicality of modifying all screens at a plant could be evaluated for cost-effectiveness. Considering the relatively high survival rates of fish impinged at Bowline Point (Section 3), it is felt that the modified screen concept incorporating a well-designed fish transportation system, constitutes a potentially effective method for reducing impingement mortality. The following is a description of the system proposed for possible application at this site.

4.3.2 Alternative Intake Design Utilizing Existing Traveling Screens Modified With Fish Lifting Troughs and Gentle Spraywash (Scheme 5)

The screen modification would consist of bolting a 10-gauge-steel, compartmented trough onto the lifting lips of the existing screen basket. The trough would be capable of maintaining a minimum water depth of 2 inches during the time of travel from the water surface to the head shaft sprocket, as shown in Figure 4.3-1. The screen wash system would also be modified to add a low pressure spray system and a fish trough, as shown in Figure 4.3-2. The new fish trough would be made of smooth boundaries, such as fiberglass or polyethylene, and would incorporate long-radius bends to minimize fish abrasion. The trough would lead into a pipeline and a jet pump system for safe return of fish to the Hudson River, in a manner similar to Schemes 1 through 4. It is also possible that fish could be returned to the river by gravity, if sufficient head is available.

Two modified screen wash systems presently exist; one in which fish are washed off of the ascending (front) face of the screen and the other in which they are washed from the descending (back) face. The back wash design is presently in operation, or is planned for installation, at a number of power plant intakes. The front wash design has not been used to date. It would appear that the existing screens at Bowline Point would require a front wash system. Therefore, further investigations into the potential effectiveness of this design would be required.

The modified traveling screen scheme would require continuous operation, at least during periods of high impingement, to minimize the impingement and travel to the collection trough. Such operation would result in additional maintenance costs. These costs would be directly related to the duration of continuous operation, the speed of screen rotation, water quality conditions and the materials of which the screen components are constructed. Utilizing the existing screens at Bowline Point, which were not designed for continuous operation, could result in high maintenance costs.

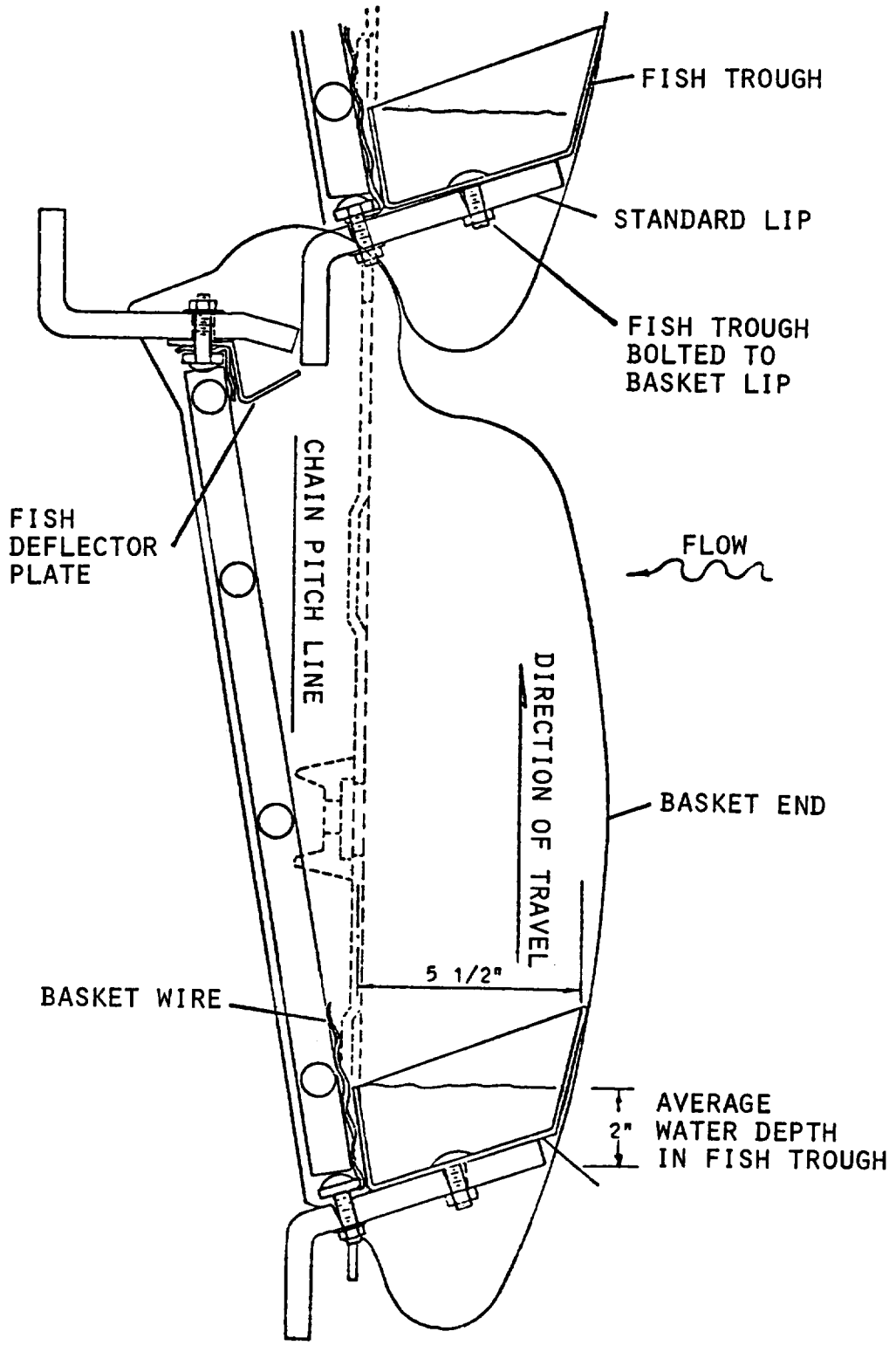
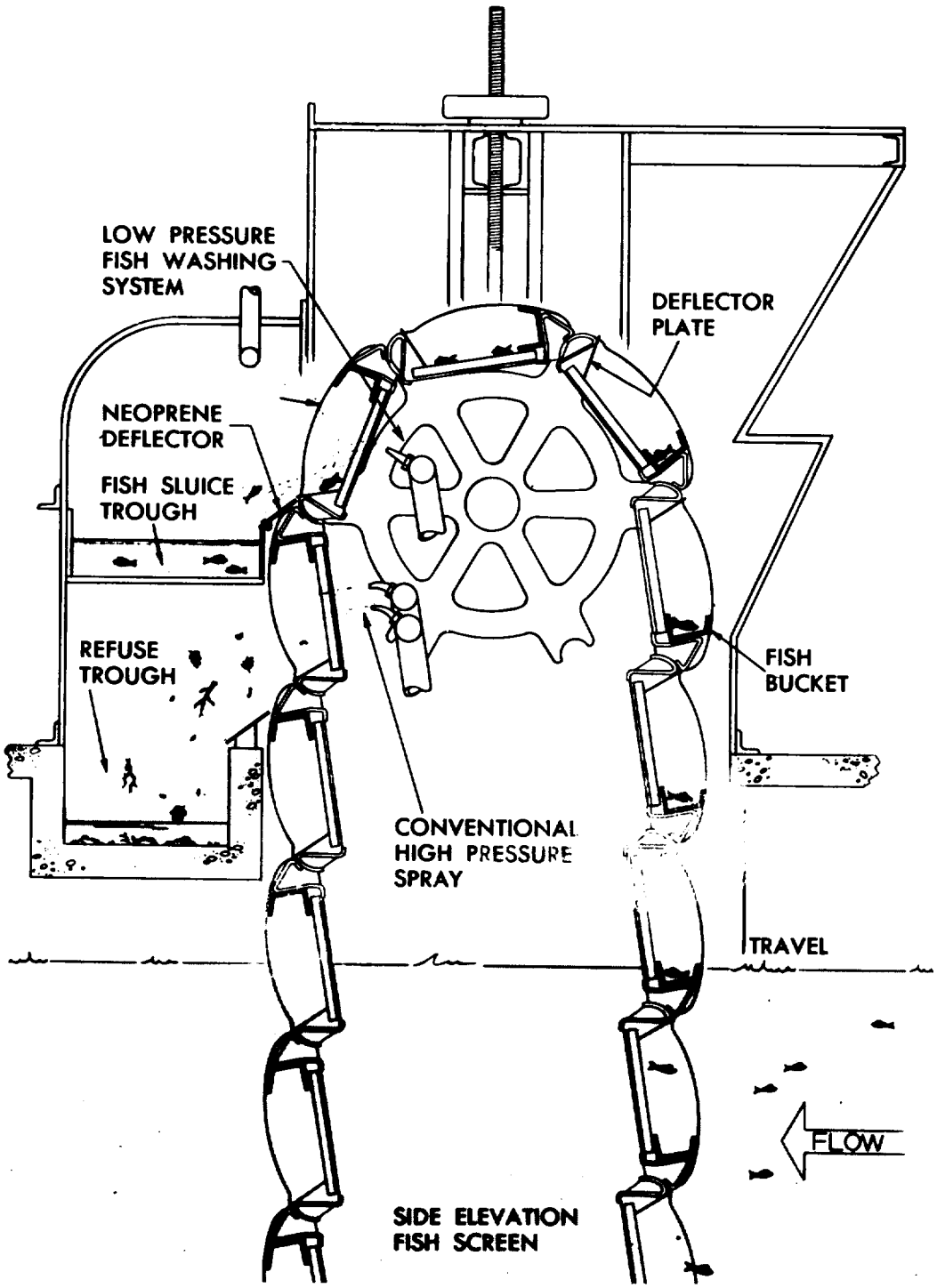


FIGURE 4.3-1
SCHEME 5
MODIFIED TRAVELING SCREEN

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.



COURTESY OF ENVIREX

FIGURE 4.3-2

COMBINATION TRASH AND FISH SCREEN

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

4.4 FISH DETERRENT CONCEPT (Behavioral Barriers)

As with fish diversion, extensive research has been conducted to develop methods for deterring fish from entering water diversions and intakes. The references cited in Section 4.2.1 and listed in full at the end of this report describe these efforts and the effectiveness of the deterrent devices which have been developed. As an overview, the following is a brief description of the devices which have been adopted to, or considered for use at, power plant intakes and the rationale by which these devices were selected or eliminated for possible application at Bowline Point.

4.4.1 Deterrent Devices

A number of devices have been developed which are designed to alter, or take advantage of, the natural behavioral patterns of fish in such a way that they will avoid entering an intake flow. These are commonly referred to as behavioral barriers and include visual keys, hanging chains, air bubble curtains, sound, lights, water jets, and electrical screens. Each device is discussed individually below.

Visual Keys

Above a specific threshold velocity, a fish in flowing water will orient itself headed into a current, even when moving with it, to facilitate respiration and feeding. In order to control its movement, the fish relies on visual and tactile stimuli. It is known that under conditions of adequate light intensity, fish utilize visual reference points, such as bottom topography, aquatic vegetation, and other objects in the water, to guide them in their movement. When ambient light intensities are low, such as at night or under highly turbid conditions, an optimotor response is not excited and fish must rely mainly on rheotactile stimuli for guidance. With the loss of visual reference points, or "keys," fish can become susceptible to entrainment in artificially created currents, such as those entering water intakes, particularly if they have been moving downstream with the ambient current.

The use of artificially created visual keys has been suggested as a means of alleviating fish entrapment at water intakes. Any object which is visible to fish can act as a visual key enabling the fish to detect their movement in the water column. Pavlov (1969) identified the loss of visual orientation in the stream of water as the principal cause of fish entrapment at water intake structures. By experimenting with artificial illumination at night, he was able to reduce entrapment. However, observations showed that although fish oriented themselves counter to the inflow current under illuminated conditions, they were in most cases carried downstream by it. "Only if some point of visual reference (a branch, underwater vegetation, etc.) was present in the path of travel..., they began to move counter to the

current." By installing artificial reference points (tree branches, reeds, etc.) in conjunction with illumination, entrapment rates were as much as 91 percent lower than those occurring in the presence of natural darkness.

While these results are encouraging, additional research has not been conducted. Further, it appears that visual keys would be effective only under illuminated conditions in relatively clear water. Due to the high turbidity of the Hudson River, it is doubtful whether visual keys would be effective, even under illuminated conditions. Further, as discussed later, artificial illumination can, in itself, create conditions which could attract fish to an intake.

Sound

Extensive research has been conducted to determine the effect of acoustical stimuli on fish behavior. Unfortunately, conclusions based on results of this research are equivocal. In a few studies, fish have been deterred, guided, or attracted by sound. Unfortunately, fish have not responded consistently to acoustical stimuli. Under field conditions, no conclusive avoidance response to sound has been observed.

The feasibility of using sound to guide or deter fish is further complicated by species-specificity. For example, not all fish possess the ability to perceive sound or localize acoustical sources. Many fish species possess a limited ability to perceive or distinguish sounds (poor auditory capacity). These fishes rely primarily on their lateral line system to distinguish near-field disturbances (Harris and van Bergeijk 1962). Thus, sound may attract some species, repel some, or have no effect at all. In addition, some fish have demonstrated rapid habituation to sound, negating the effectiveness of continuously operated underwater sound generation.

A reliable method does not yet exist for using an underwater acoustic system to reduce the number of fish entering intake structures. Because of species-specificity, no single method is likely to be an effective deterrent for all species.

Lights

Considerable research effort has been expended to study the use of light as the stimulus for guiding fish (Fields 1956; Fields and Finger 1954a, 1954b, 1956; Fields and Murray 1956; Fields, Adkins, and Finger 1954, 1955; Fields, Finger, and Verhoeven 1954a; Fields, Adkins, Finger, and Carney 1955; Fields et al 1954; Fields, Adkins, Carney, Finger, and Johnson 1955; Fields et al 1958; Fields, Finger, Adkins, Carney, and Pyke 1955a, 1955b; Fields, Johnson, Finger, Adkins, and Carney 1955a, 1955b). All of the work by Fields and his associates has been concerned with guiding salmon and trout through the use of colored lights,

flashing lights, lights of different intensities, and pulsating lights of various frequencies. Much of the work has been highly successful in attracting salmon to fish ladder entrances. However, some problems have been uncovered by other researchers. The phototaxis exhibited by fish varies from species to species. Many fish are attracted to light, others are repelled, and still others are unaffected. Therefore, to use this behavioral method at particular sites, it must be determined which fish species would be encountered, how they would react, and whether any seasonal variations in the species of entrained fish would make the system only partially effective.

Brett, McKinnon, and Alderdice (1954) found marked avoidance of a lighted area by sockeye salmon but obtained diverse results using a narrow beam of light. However, Brett and McKinnon (1953) found no avoidance of, or attraction to, light by spring salmon. Craddock (1956) found that water conditions are very important when lights are utilized for attracting or repelling fish.

The EPA (1976) states that, "as far as could be determined, there are no existing intakes where a light barrier is functioning successfully. Light also has the adverse effect of attracting fish under certain circumstances and has resulted in a complete shutdown of plants."

Due to a lack of success and possible adverse effects with lights, this device is not considered practical for application at Bowline Point either alone or in conjunction with another device, such as an air bubble curtain.

Electrical Screens

Extensive literature is available pertaining to various electrical barrier devices (Bell 1973; Lethlean 1953; Nakatani 1954). These devices have been designed to prevent the passage of upstream migrants, to keep fish away from structures or to guide them into bypass areas for removal.

Several problems exist with electrical barriers which limit their potential application at power plant intakes. First, in attempting to guide fish downstream to a bypass with an electrical field, the potential for fatigue can seriously reduce the effectiveness of the barrier. As fish move along the electrode array, the electric field can cause rapid fatigue, thereby causing the fish to be swept through the barrier (Sonnichsen et al 1973). A second problem is that, since the total body voltage is directly proportional to length, a field strength suitable to divert smaller fish may result in injury or death to larger individuals (Mowbray and Saila 1973). Further, field strength is very difficult to maintain in water of changing conductivity. Therefore, a voltage set to repel fish at a selected conductivity could stun or kill fish as conductivity increases.

In summary, although electric screens may have some application at certain sites, a failure to solve many of the major problems inherent in the screen design has resulted in the termination of most research in this area (EPA 1976). Therefore, electric screens are not considered practical for application at Bowline Point.

Hanging Chains

Most of the research with hanging chains has been conducted with salmonids in an attempt to divert fish with an angled chain array.

Brett, MacKinnon, and Alderdice (1954), working with migratory sockeye salmon (Oncorhynchus nerka), tested the effectiveness of hanging chains in an experimental trough. One end of the 58-foot trough was separated lengthwise by a 10-foot-long plate glass divider. On one side of the divider, a barrier of safety chain, hung at 2-inch to 4-inch intervals, was positioned at a 45-degree angle to the water flowing at 1.5 fps. Test fish were forced to select one of the two passageways, thereby passing either through the chain barrier or guiding along it into the open side of the trough. The arrangement "yielded the most consistent and promising results of all experiments conducted." At night, an average of 71 percent of the fish were deflected. Coho salmon tested in the same arrangement frequently were not deflected at all.

Further studies by Brett (1955) have shown that vibrating the chains at 140 to 160 rpm increased the deflection of sockeye salmon. The most effective guiding angle was 57 degrees to the flow, with the chains spaced 4 inches apart. As before, however, young coho salmon were not deflected.

Fields, Finger, and Verhoeven (1954a) studied the use of chain barriers to deter four species of salmon smolts: coho salmon, Chinook salmon, sockeye salmon, and steelhead trout. The fish were forced to choose between two experimental alleys; one of the two alleys was traversed by an array of hanging chains spaced 2.5 cm (1 inch) apart. The chain barrier deflected 56 percent of the fish at night.

These results indicate that hanging chains could be effective in deterring the movement of fish into Bowline Pond. Since the chains appear to be effective even at night, the avoidance observed must result mainly from a tactile, rather than a visual, response. For this reason, the chain barrier has potential for effective application in the highly turbid river water at Bowline Point.

Air Bubble Curtains

Air bubble curtains have been used at many locations as a means to divert fish. The success of this device has been variable and appears to be affected by such factors as species, temperature, light intensity, water velocity, and orientation within a water body.

Early research indicated that the effectives of an air bubble curtain may be highly dependent upon illumination. However, more recent studies by Bibko, Wirtenan and Kueser (1972) have shown that the curtain can be effective at night under low ambient light conditions. These studies were conducted with striped bass and gizzard shad (Dorosoma cepedianum) in an oval tank. The air bubble curtain consisted of a 4-foot-long, PVC pipe drilled with 1/32-inch air holes spaced 1 inch apart. Striped bass repeatedly avoided the air curtain at test temperatures of 52° and 42°F, but drifted passively with the current at a temperature of 33°F. Gizzard shad exhibited a similar response.

Not all of the present air bubble curtain installations have been successful. For example, an air curtain has not been effective at the Indian Point Generating Station on the Hudson River (EPA 1976). At this facility, the curtain is located immediately in front of the intake screens in an area of high velocity. It is possible that the curtain would be more effective if it were placed at a distance from the screens thereby diverting fish away from the high velocity flow.

At a power plant on Lake Michigan, an air bubble curtain was placed across the intake channel well in front of the intake structure. The curtain has been so successful in reducing alewife impingement day and night during more than 4 years of operation that another utility is installing an air curtain at a new station on Lake Michigan.

While the effectiveness of an air bubble curtain may be species-specific, proper location and design are essential to successful application.

While the potential effectiveness of an air bubble curtain at Bowline Point cannot be quantitatively defined, it is believed that this device should be considered. Since the studies and applications described above indicate that the curtain can be effective under dark conditions, the turbidity of the Hudson River might not preclude its use provided that river species react to the device. However, this device should be evaluated further prior to installation.

Water Jets

Experimental studies were conducted in 1963–1964 by the U.S. Bureau of Commercial Fisheries (Bates and VanDerwalker 1964) to determine the effectiveness of water jets in guiding fish to a bypass. The experiments were conducted in a test flume that measured 60 feet long, 6 feet wide, and 4 feet deep. The water jet curtain consisted of vertical pipes spaced 1.2 feet apart, each 3 feet long, drilled with 1/32 inch-diameter orifices space vertically at 1/2-inch intervals the full length of each pipe. The line of vertical pipes was positioned at a 20 deg angle to the flow leading to a 1-foot-wide bypass.

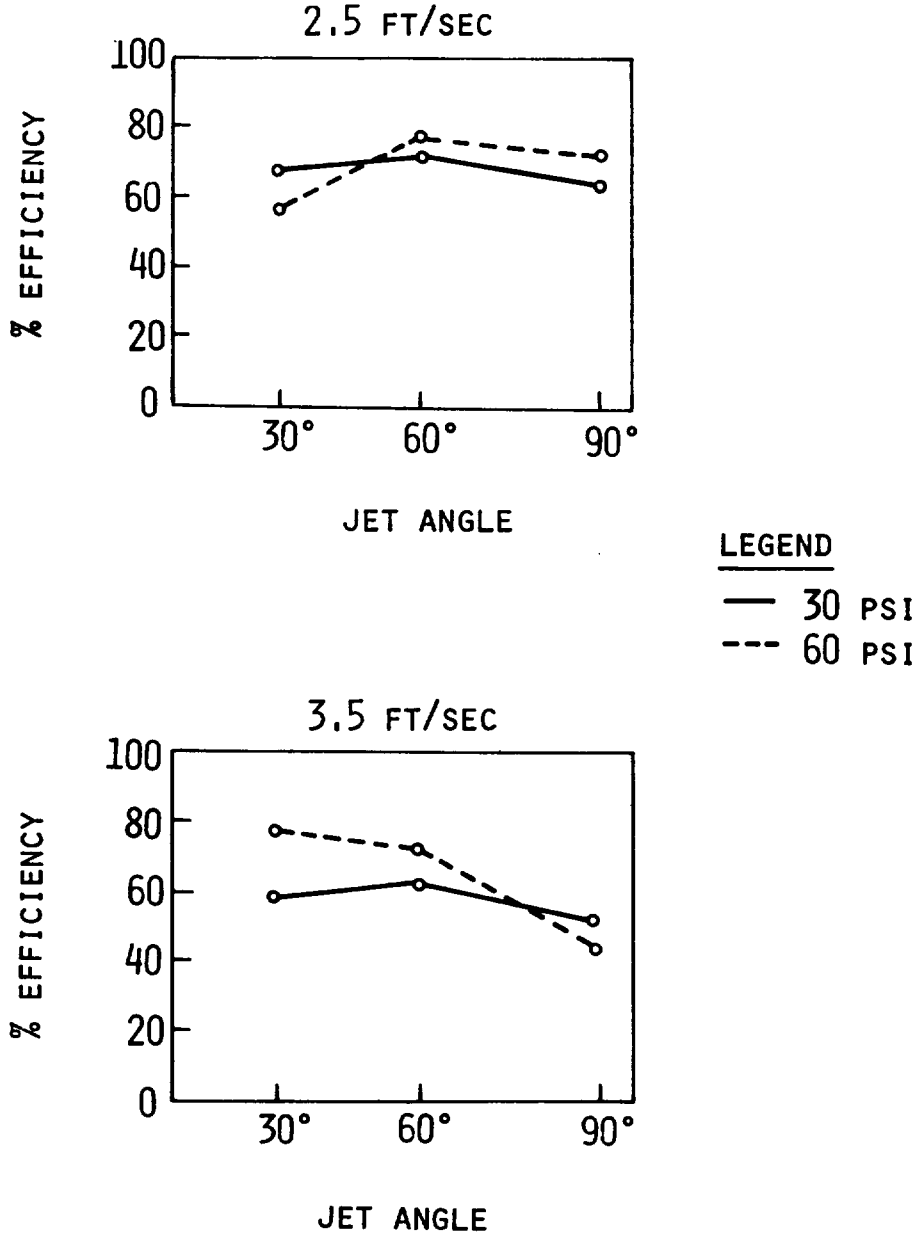
The approach to bypass velocity ratio was maintained at 1:1.4 while the approach velocity was varied between 2.5 and 3.5 fps. Two water jet pressures, 30 and 60 psi, were tested. Because fish response could vary as a factor of the angle of the jet in relation to the velocity of the approach flow, jet angles of 30, 60, and 90 degrees were selected for testing. For each test, water in the flume was held at a constant 1.2-foot level. The water temperatures ranged between 46° and 52°F. Test fish were hatchery-reared, spring chinook salmon, ranging from 62 mm to 105 mm in length with a mean length of 87 mm.

The results of the various tests were expressed as percentages of the total number of fish swimming through the flume that were guided into the bypass (Figure 4.4–1). The mean water jet deflection efficiency, with an approach velocity of 2.5 fps, a jet exit angle of 60 degrees and water pressures of 30 and 60 psi (corresponding to jet velocities of 40 and 56 fps) was 75 percent.

The results demonstrated that a high level of deflection was possible. Visual response by fish to the water jets was not considered to be a factor in deflection due to the limited contrast between the flume flow and the water jets and the fact that day and night deflection efficiencies were comparable. Therefore, it might be presumed that the dominant guiding response was rheotactile rather than optimotor in nature.

Although the experimental results indicated promise in the use of water jets as a method of deflecting fish, the U.S. Bureau of Commercial Fisheries, Fish Passage Research Program, judged this method to be impractical for the following reasons:

a. The application intended by the U.S. Bureau of Commercial Fisheries (screening a river 15 feet deep and 500 feet wide) would require a continuous water flow of approximately 1,250 cfs which was deemed to be prohibitively large.



NOTE:

TESTS CONDUCTED
WITH CHINOOK SALMON

(BATES AND VANDERWALKER 1964)

FIGURE 4.4-1

WATER-JET EFFICIENCIES
IN DEFLECTING FISH

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

b. Concern existed relative to the extensive maintenance which would be required to prevent clogging from debris and rust.

Although the above considerations may make the water jets impractical for screening large expanses, they do not preclude the use of water jets at power plant intakes. The water demand would be much less for an intake application, and jet water screening and proper use of nozzle materials could minimize the need for extensive maintenance. While this type of barrier is not known to have been applied to power plant intakes, these considerations suggest that the use of water jets as a behavioral barrier warrants further investigation.

4.4.2 Alternative Intake Design Utilizing Fish Deterrent Devices at Bowline Pond Inlet

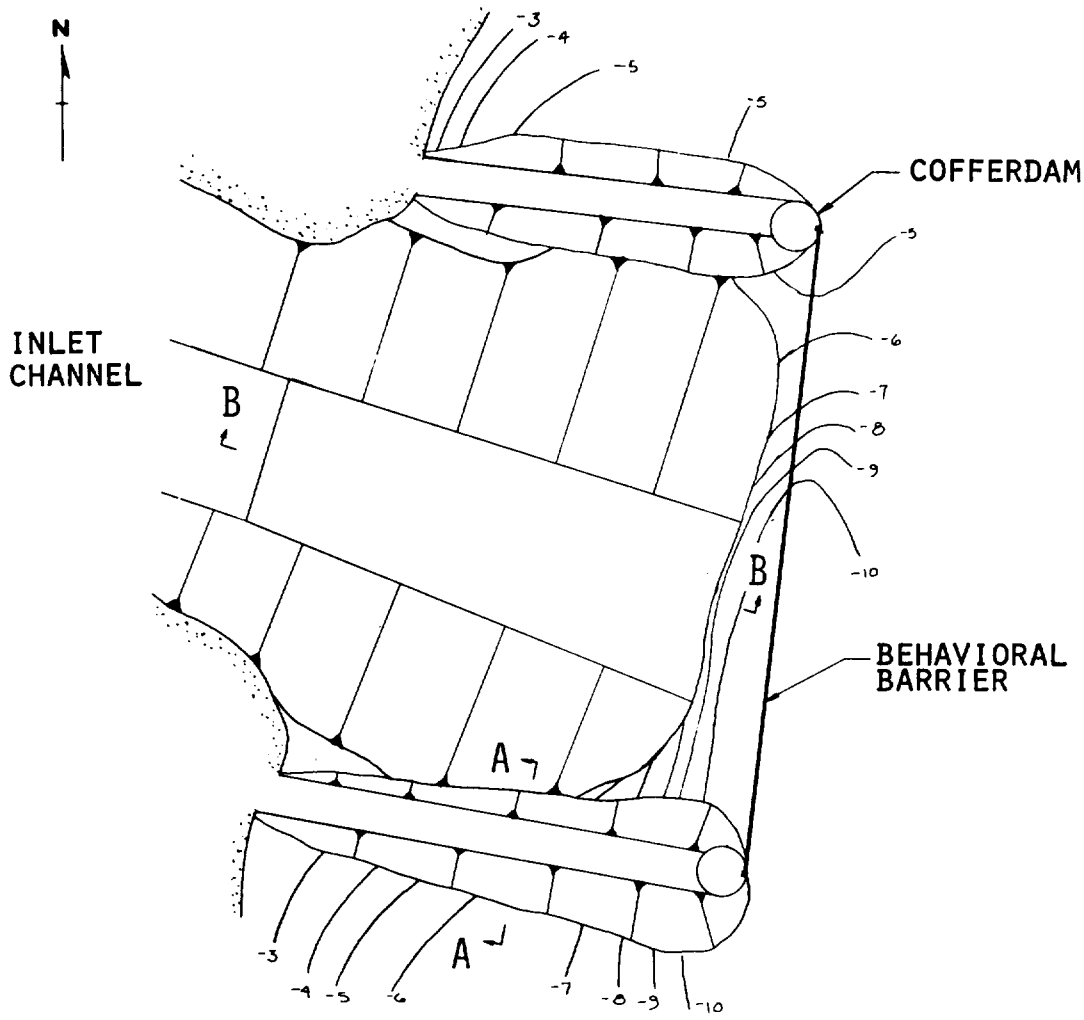
Although the behavioral barriers described above have not been proven to be highly reliable in preventing fish entrapment at water intakes, it is possible that a barrier, properly located at the Bowline Pond inlet, could deter a substantial number of fish from entering the pond and thus reduce the potential for impingement on the intake screens. Such a scheme could be used as a first-phase approach to minimizing impingement. If the barrier did not reduce impingement to acceptable levels, then one of the other schemes presented in this report could be constructed and used in conjunction with the behavioral barrier.

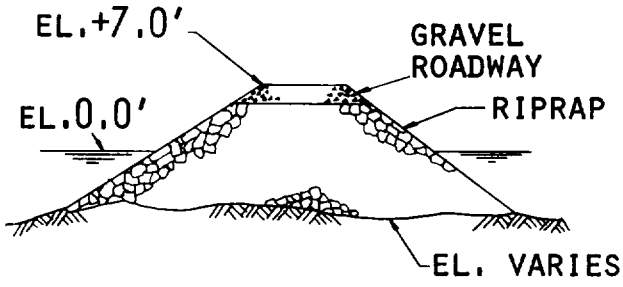
A possible behavioral barrier design for Bowline Point is shown in Figure 4.4–2. This scheme incorporates an additional concept which should improve the effectiveness of the selected device.

In dredging the inlet channel to Bowline Pond, a relatively deep hole in an otherwise shallow shoreline area was created. Therefore, fish moving along shore or onshore can enter the hole and, rather than swimming back up the relatively steep slope to the river, they travel with the inlet flow into the pond. Therefore, if a barrier were placed at the mouth of the inlet within the dredged area, it would be attempting to deter fish which are already somewhat trapped.

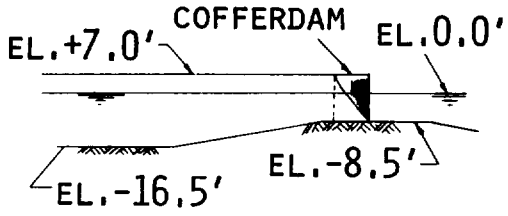
If, however, walls were extended out from the shoreline to the edge of the dredged area and a barrier were then extended across the new opening, the barrier would be located in shallow water. In this way, fish moving along a certain depth contour would be guided by the walls and would approach the barrier at their selected depth. The walls and barrier would, therefore, constitute an artificial extension of the shoreline along which the fish could move naturally.

The design and location of the extension walls and behavioral barrier shown in Figure 4.4–2 is tentative. Further investigations would be necessary to more fully document the





SECTION A-A



SECTION B-B

FIGURE 4.4-2

SCHEME 6 - FISH DETERRENT DEVICE

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

movement of fishes in the area of the pond inlet such that the most potential effective arrangement could be identified.

At this time, three behavioral barrier devices are believed to offer the greatest potential for effective operation: an air bubble curtain, a hanging chain barrier, and a water jet curtain. Possible designs for each of these devices are discussed individually below and are shown on Figure 4.4-3. Each device would be attached to a beam, supported by H-piles, or set on a concrete footing extending from wall to wall across the newly formed inlet.

Air Bubble Curtain

The air bubble curtain device would consist of an air diffuser steel pipe ranging in size from 12 to 6 inches in diameter drilled with 1/32-inch holes set 1 inch apart. The pipe diameter would decrease in diameter moving away from the air supply hose such that an equal pressure and flow would be maintained along the entire length of the diffuser. The diffuser pipe would be secured to the concrete footing across the bottom of the inlet. Air would be supplied to the diffuser by a 440-scfm compressor. The basis for the airflow is a rate of 2 scfm per foot which was found to be suitable from previous application. The compressor would be located in an enclosed, insulated structure on the shoreline.

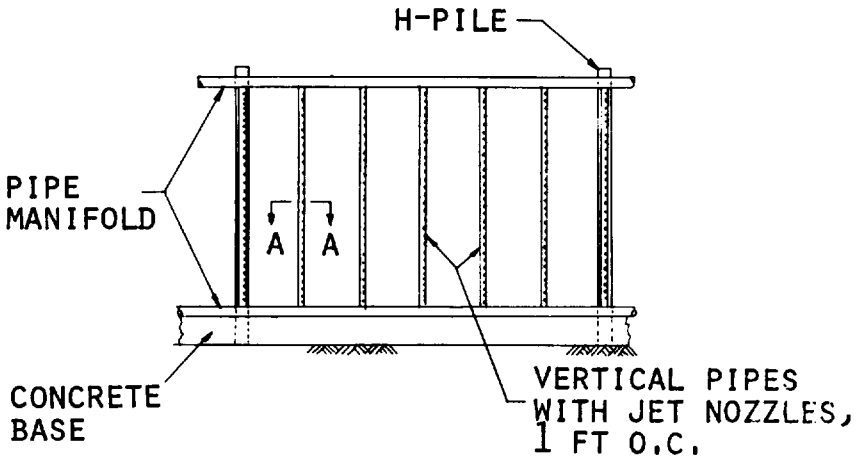
Hanging Chains

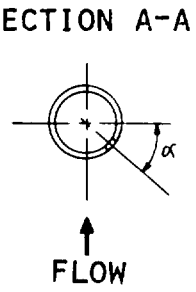
The barrier would consist of a row of closely spaced chains suspended from a beam which in turn would be supported by H-piles. The chains would be of 9/32-inch steel, with nominal inside link dimension of 0.90 inch by 0.38 inch. The chains would be centered at 2 inches. The steel beams and the chains would be assembled onshore and then fastened in place at the inlet.

Water Jet Curtain

The water jet curtain would consist of vertical pipes. Each pipe would be drilled with regularly spaced nozzle holes set at an angle to the approach flow, which would jet water at a high velocity to deflect fish away from the inlet. The pipes would be of 2-inch stainless steel spaced at 1-foot intervals. The water jet nozzle holes would be 1/32-inch diameter spaced at 0.5-inch intervals. The 1-foot spacing between the vertical bars would be maintained in order to minimize the potential for clogging at the pond inlet.

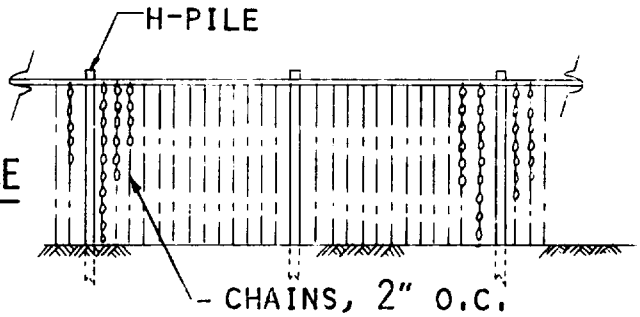
The 1/32-inch-diameter holes are selected to minimize the flow rates required to supply the water jet curtain. The flow rates required to provide a jet velocity of 55 fps in the 250-foot-long

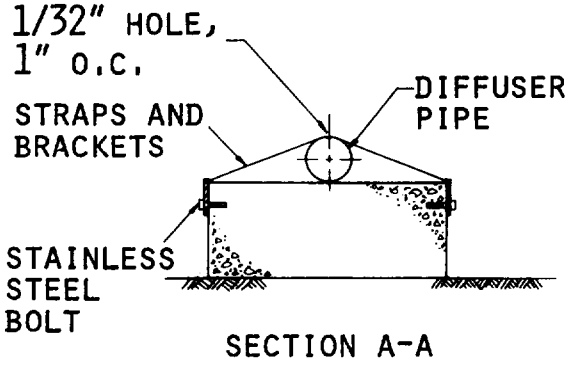


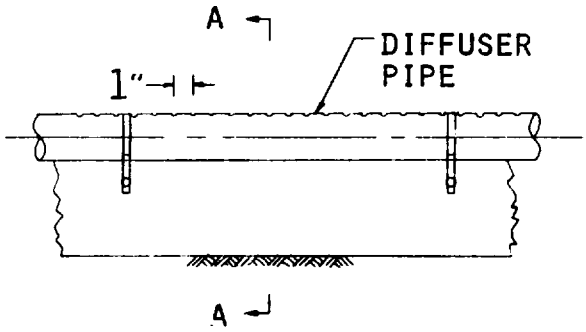


WATER JET CURTAIN

HANGING CHAIN DEVICE







AIR BUBBLE CURTAIN

FIGURE 4.4-3

DESIGN OF BEHAVIORAL BARRIERS

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

by 10-foot-deep curtain is 20 cfs. The associated pressure to deliver the 55 fps velocity is 60 psi.

The use of 1/32-inch nozzle holes would require microstraining of the supply water feeding these holes. The water could be pumped from the pond through a structure protected by a traveling screen which removes debris larger than 3/8 inch in size. The water would then be further screened through a self-cleaning pipeline strainer utilizing wire mesh openings of 0.0165 inch, which are half the size of the jet holes of 0.033 inch (1/32 inch).

The possibility of scale formation that could clog the jet nozzle holes would also have to be investigated utilizing water quality data from the pond. No scale formation would be expected to occur in the preforated pipe if raw water is used to drive the water jets. Stainless steel tubing could be used to prevent rust or wearing of the nozzle holes.

The vertical nozzle pipes and manifold system could be fabricated onshore and transported to the pond inlet where they could be fastened to H-piles by divers.

4.5 FISH TRANSPORTATION SYSTEMS

Schemes 1 through 5 would require a method for transporting bypassed fish back to the Hudson River. For reasons discussed below, a jet pump was selected as the most practical method for transporting fish at Bowline Point and was, therefore, incorporated into each of the alternative designs presented above. An alternative to a jet pump is a lift basket system which can discharge into a pipeline for gravity return to a selected discharge point. This system, and the reasons for not selecting it for possible application at Bowline Point, are also discussed below. In addition, the potential applicability of a centrifugal type pump for transporting fish is discussed.

4.5.1 System Descriptions

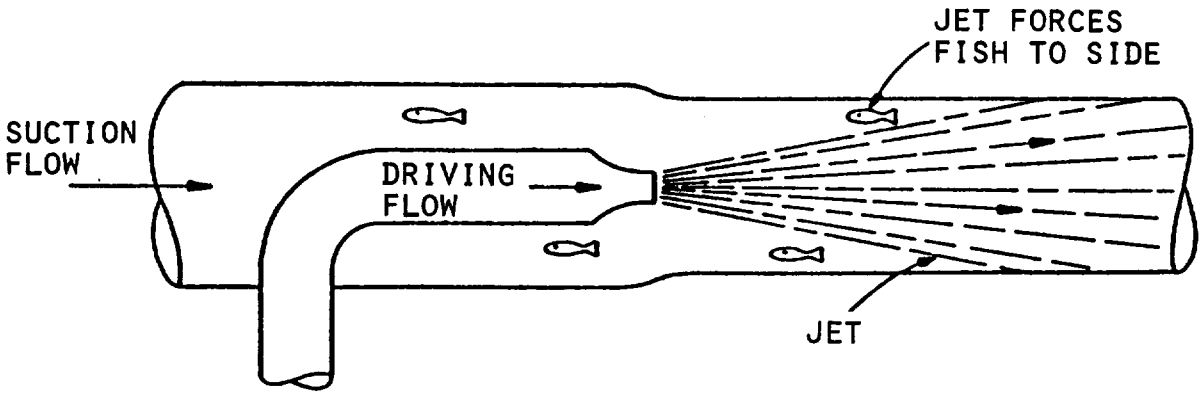
4.5.1.1 Jet Pump

The jet pump is a unit which performs its pumping action by the transfer of energy from a high velocity jet to one of low velocity. There are two types of jet pumps, as shown in Figure 4.5-1: the core type, in which a concentric nozzle or multiple nozzles are placed centrally, and the peripheral type, in which the nozzle or nozzles are placed around the periphery.

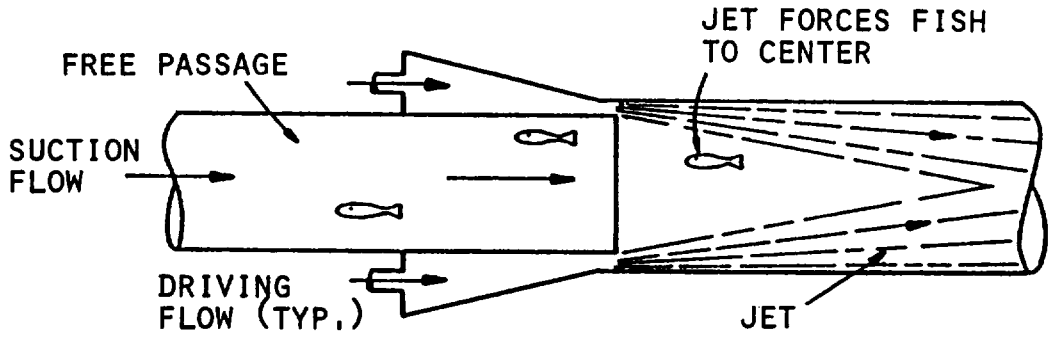
The major elements of either type are the driving nozzle, the suction nozzle, the mixing tube, and the downstream diffuser. The high pressure driving flow enters the mixing tube by means of a nozzle which gives it a high velocity. The nozzle can be of various designs and placed in different configurations and number. In the mixing tube, the momentum exchange from the high velocity flow to the low velocity flow takes place. The suction flow is accelerated at the expense of the energy of the driving flow. The shape of the mixing tube best suited for water jet pumps is one with parallel walls. When the combined flow leaves the mixing chamber, it will have attained complete mixing. A diffuser is sometimes added if it is deemed necessary to convert part of the exit velocity into pressure energy.

Extensive studies by Stone & Webster (1975; Taft et al 1976) indicate that the peripheral type jet pump has less potential for causing injury or stress than the core type pump. Therefore, the peripheral pump is now considered to be the most practical method for inducing transport pipe flows.

Peripheral jet pumps have been used in the past to transport live fish in hatcheries. Harris Thermal Transfer Products, Tualatin, Oregon, manufactured single-stage and three-stage peripheral jet pumps for use in hatchery truck loading and handling of stock. The mixing tube is 4 inches in diameter. The pump can move 150 pounds of fish per minute with a maximum lift of 5 feet per stage. These pumps were used to transport 4- to 14-inch-long salmonids in the Snake River hatchery at Bulle, Idaho, and in the



CORE-TYPE JET PUMP



PERIPHERAL-TYPE JET PUMP

FIGURE 4.5-1

TYPES OF JET PUMPS

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

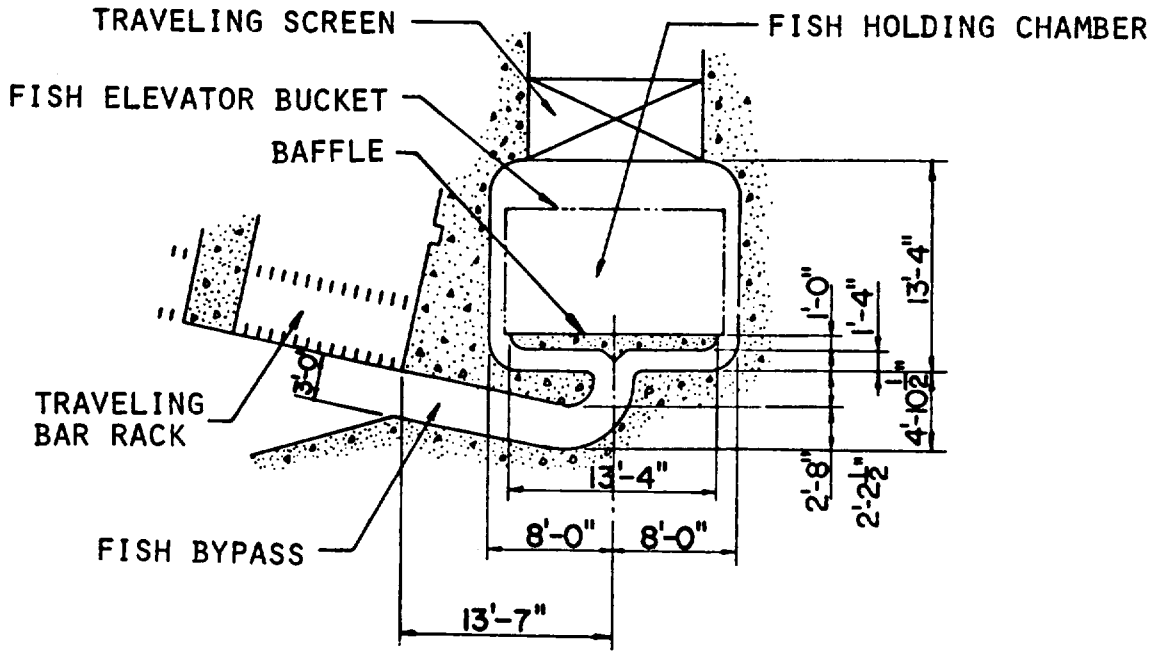
Gnat Creek hatchery and the Oak springs hatchery of the Oregon State Game Commission, with no initial or delayed mortality (Harris 1974). The U.S. Bureau of Commercial Fisheries, Seattle, Washington, designed a fish conveyance scheme utilizing a peripheral jet pump in 1962, but the system was not constructed or tested.

Information on hydraulic performance characteristics of the peripheral jet pumps exists, but is mostly proprietary. However, Stone & Webster (1975), in conjunction with the development of a fish transportation system for power plant application, has derived the performance characteristics through a semi-empirical solution verified by model tests. The fish transportation system hydraulics have also been derived analytically, verified by model tests, and have been computerized in order to allow optimization of a system design for a particular application.

As previously mentioned, Stone & Webster has recently conducted extensive studies to evaulate the effectiveness of a jet pump for inducing bypass and pipe flows and transporting fish safely. In these studies, each element of a complete fish diversion system, including an angled flush-mounted traveling screen, transport piping, and jet pumps, was initially evaluated individually. The results of these individual studies were then used to determine the optimum range of operating conditions for each element. Following this evaluation, the components were connected into a complete system model incorporating a large peripheral type jet pump (10-inch-ID suction pipe). Results of testing with alewives in the system model have shown that this relatively fragile species can be diverted and transported effectively over a range of hydraulic and environmental conditions with low resultant mortality (Stone & Webster 1976; Taft et al 1976), even at jet nozzle velocities as high as 50 fps. Therefore, although the jet pump may contribute to mortality within the system, the fact that the overall mortality was low indicates that the pump is a practical method for transporting fish. It would be reasonable to expect that hardier fish species, such as white perch and striped bass, would experience even lower mortality. Accordingly, a jet pump was selected for possible application at Bowline Point. Should a fish transport system be required at Bowline Point, tests would be required with the species of concern to verify the suitability of this transport system.

4.5.1.2 Lift Basket System

Lift baskets have been used frequently at hydroelectric facilities and water diversions for lifting fish to trucks for transport, but only one system has been designed for removing fish from a bypass collection area within a power plant screenwell. This system is part of the louver diversion scheme presently under construction at the Southern California Edison San Onofre Station described in Section 4.2.1. The lift basket system (Figure 4.5-2) consists of a bypass approach channel, a



(DOWNS & MEDDOCK 1974)

FIGURE 4.5-2

FISH BYPASS AND HOLDING CHAMBER

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

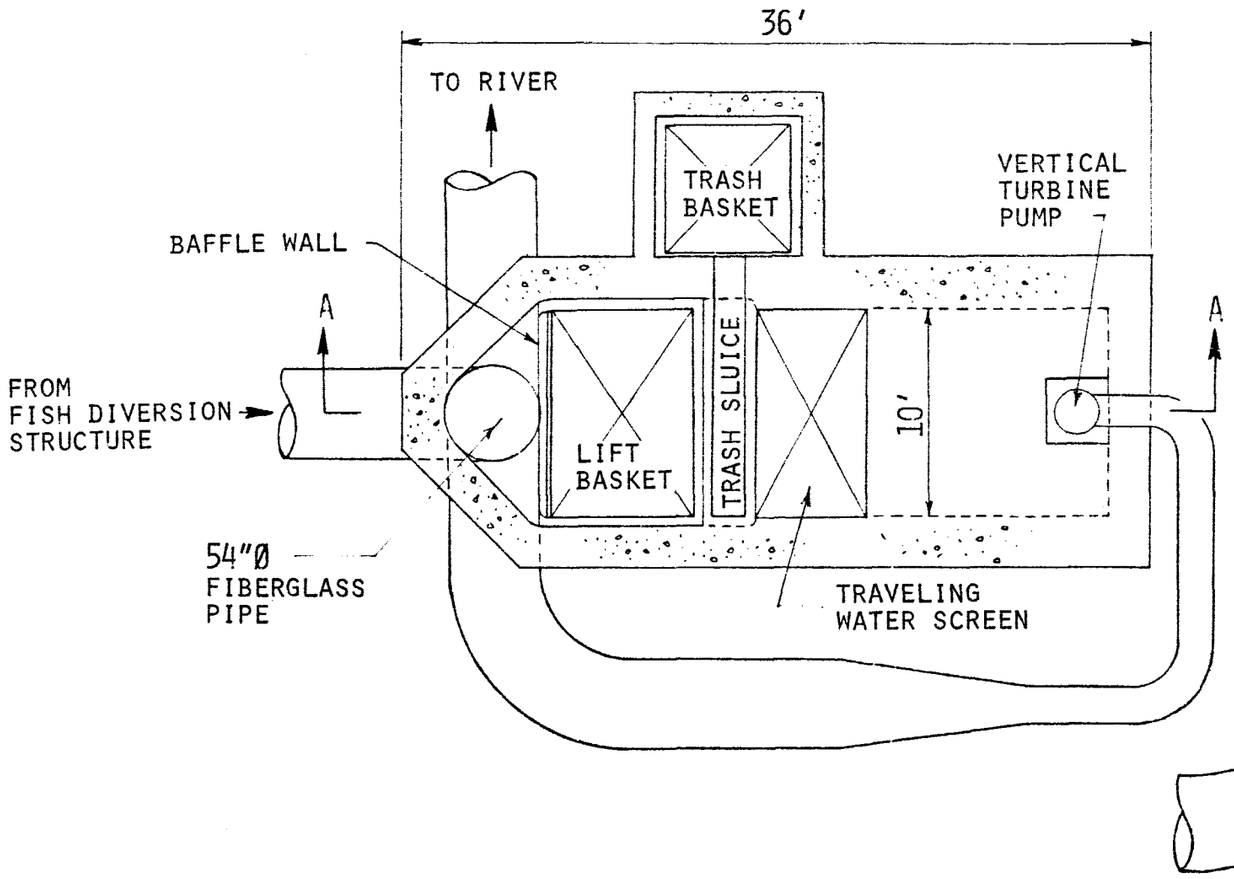
baffle wall, an elevator basket and a vertical traveling screen. Fish enter the collection area around the baffle wall which creates a quiescent area over the elevator basket. The traveling screen confines collected fish in this area and collects bypassed debris. At specified intervals the basket is lifted mechanically and the water and fish contained therein is spilled into a sluiceway for return to the ocean. Figure 4.5-3 shows a lift basket arrangement for the Bowline generating station.

There are two main concerns relative to the potential effectiveness and practicality of a lift basket for possible application at Bowline Point. First, although the bypass and collection area configuration proposed for the San Onofre station have been shown to be effective in congregating fish over the lift basket, the actual lifting and sluicing procedure has not been evaluated. It is possible that fish could avoid the basket as it is ascending and that collected fish would be injured by the sluicing process. Second, the lift basket design is relatively complex in terms of construction, operation, and maintenance. The lift basket and traveling screen have many moving parts which are subject to the operational problems commonly experienced with conventional traveling screens. Further, when used in brackish or salt water, many of the system components would have to be constructed of corrosion-resistant materials, which are costly.

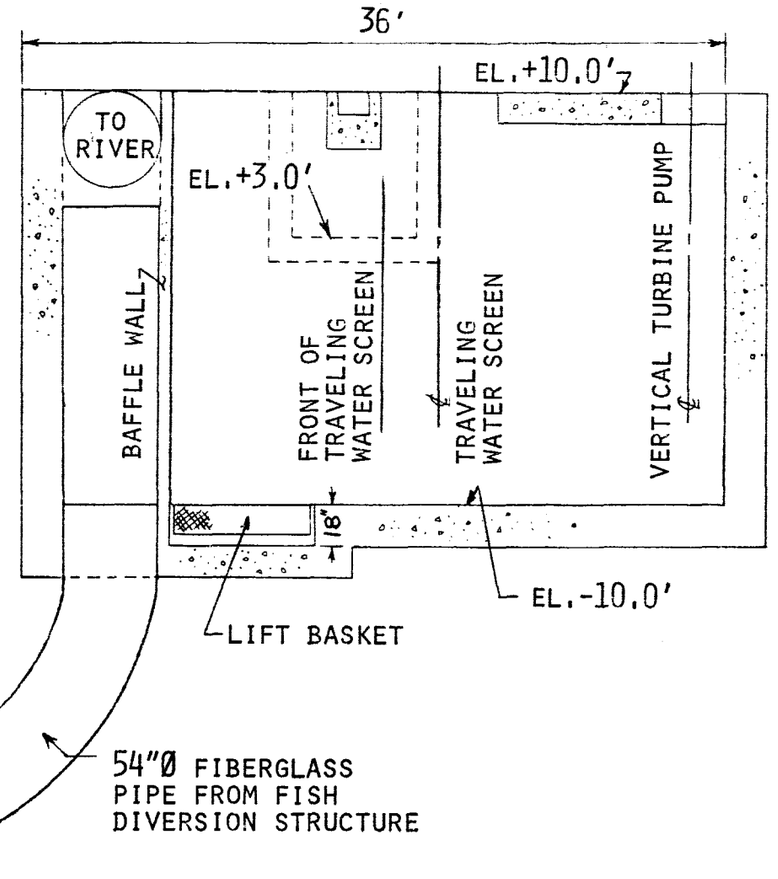
Since the jet pump has no moving parts other than the standard driving flow pumps, and is believed to have potential for safely transporting Hudson River fishes, it is considered more practical for Bowline Point than the relatively complex lift basket which has not been extensively researched.

4.5.1.3 Centrifugal Pumps

The use of centrifugal pumps has been demonstrated as a possible method of transporting fish. Kerr (1953) discusses experiments conducted to determine the best type of pump for handling fish at the Contra Costa steam station. Bedell and Flint (1969) discuss the use of a centrifugal pump to move fish from hatchery ponds to trucks and handling tanks. The pump has been operated successfully and is used to pump fish ranging from 2 to 12 inches long to heights up to 15 feet above the water level. California Department of Fish and Game, Oregon State Fish Commission, the Washington State Department of Game, and the U.S. Bureau of Sport Fisheries and Wildlife are presently using non-clog centrifugal pumps, since these pumps have shown that they cause less stress to fish than conventional netting techniques. The species most commonly handled in these facilities include catfish and various salmonids. In addition, this type of pump has been tested at a number of power plant sites. The results of these tests indicate a need for further research; however, it appears that a centrifugal pump has a good potential for transporting certain fish species with high survival.



PLAN



SECTION A-A

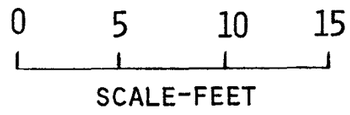


FIGURE 4.5-3

LIFT BASKET

ALTERNATIVE INTAKE DESIGN STUDY
BOWLINE POINT GENERATING STATION
ORANGE AND ROCKLAND UTILITIES, INC.

Non-clog centrifugal pumps include impellers with large passages and a large clearance between the impeller and the cutwater. A non-clog pump can handle relatively large entrained solids but at the cost of reduced hydraulic efficiency.

Two designs of non-clog centrifugal pumps exist. One design uses a "bladeless" impeller. The largest pump in this design is a 10-inch-diameter one, which can pass a 6-inch-diameter solid. The capacity of this pump is about 3,000 gpm and the recommended speed, for fish transportation, should not exceed 600 rpm. A second design uses a recessed impeller. However, recessed impeller pumps have not been used successfully as fish pumps although they are used as food pumps.

4.5.2 Transport Pipe Design Criteria

In addition to jet pumps, reference has been made to fish transportation pipes which would carry bypassed or collected fish back to the Hudson River. The intent of discharging the fish to the river is to prevent the reimpingement which has been documented during the studies described in Section 3. In transporting fish through a pipe over a long distance, consideration must be given to the potential for injury with a transport pipe. Since all the schemes incorporate similar piping and jet pump arrangements, the general design criteria to be followed are listed below:

(1) The pipe should be constructed of a non-abrasive material, such as fiberglass, polyethylene, or coated steel, to prevent injury due to abrasion.

(2) All bends should be of the long-radius type such that fish are not forced toward the sides in these areas.

(3) The pipes should be sized such that the velocity at a given flow rate is high enough to transport fish quickly to the release point, but not so high that the fish lose their orientation completely. Past studies by Stone & Webster (1975) indicate that velocities from approximately 5 to 8 fps are acceptable.

(4) Pipe joints should be constructed carefully so that they are even and do not create jagged obstructions within the pipe which could injure fish.

(5) Valves, flow meters, etc., if required, should be designed to create as little obstruction to, or disruption of, the pipe flow. For example, valves or gates within a pipe represent an obstruction to free fish passage and venturi-type flow meters create undesirable velocity acceleration and deceleration conditions.

(6) Transitions from smaller to larger pipes, or vice versa, should be gradual so that rapid velocity changes, which fish might avoid, do not occur.

(7) At the point where bypass transition sections enter two or three individual pipes (Schemes 1 through 4), the pipes should be carefully manifolded so that the bypass flow is equally distributed among each section.

(8) The pipe should be located below the frost depth to prevent possible icing.

(9) Biofouling control, if any, of the fish transportation pipe should be considered.

All of these criteria have been considered in the design of alternative Schemes 1 through 5 such that stress occurring within the transport piping would be minimized.

REFERENCES

Bates, D.W.; Logan, O.; and Pesonen, E. 1960. Efficiency evaluation, Tracy Fish Collecting Facility, Central Valley Project, 1960.

Bates, D.W. and VanDerwalker, J.G. 1964. Exploratory experiments on the deflection of juvenile salmon by means of water and air jets. Fish passage research program, U.S. Bureau of Commercial Fisheries, Seattle, Washington (September 1964).

Bedell, G.W. and Flint, R.D. 1969. Pumping fish in California. California Fish and Game, Progressive Fish Culturist, 31(4), 1969.

Bell, M.C. 1973. Fisheries handbook of engineer's requirements and biological criteria. U.S. Army Corps of Engineers, North Pacific Division, Portland, Oregon.

Bibko, P.N.; Wirtenan, L.; and Kueser, P.E. 1972. Preliminary studies on the effects of air bubbles and intense illumination on the swimming behavior of the striped bass (Morone saxatilis) and the gizzard shad (Dorosoma cepedianum). Third Annual Symposium on Entrainment and Entrapment Effects, Johns Hopkins University, Baltimore, Maryland.

Brett, J.R. 1955. Experiments with guiding young salmon over dams. In: Scientists' report and industry on research in 1954. Western Fisheries 50: 26–30.

Brett, J.R., and MacKinnon, D. 1953. Preliminary experiments using lights and bubbles to deflect migrating young spring salmon. J. Fish. Res. Bd. Canada, 10(8):548–558.

Brett, J.R.; MacKinnon, D.; and Alderdice, D.F. 1954. Trough experiments on guiding sockeye salmon fingerlings. Progress Reports of the Pacific Coast Stations of the Fisheries Research Board of Canada, No. 99:24–27.

Clay, C.H. 1961. Design of fishway. Dept. of Fisheries, Ottawa, Canada.

Craddock, D.R. 1951. An annotated bibliography on subjects pertaining to the use of lights in controlling the movements of fish, fish vision and reactions of fish to light. U.S. Fish and Wildlife Service, Pacific Salmon Investigation, Seattle, Washington (September 1951).

Downs, D.I. and Meddock, K.R. 1974. Design of fish conserving intake system. Journal, Power Div. ASCE, Vol. 100, No. P02, (December 1974).

Farr, W.E., and Prentice, E.F. 1974. Mechanical operation of horizontal traveling screen Model VII. In Proceedings of the Second Workshop on Entrainment and Intake Screening, L.D. Jensen (Ed.).

Fields, P.E. 1956. The effect of electric light upon the upstream passage of sockeye salmon through the University of Washington School fish ladder, University of Washington, School and Fisheries, Seattle, Technical Report No. 10.

Fields, P.E., and Finger C.L. 1954a. The reactions of young salmonidae to light. University of Washington, School of Fisheries, Technical Report No. 2.

_____. 1954b. The reaction of five species of young Pacific salmon and steelhead trout to light. University of Washington, School of Fisheries, Technical Report No. 7.

_____. 1956. The effectiveness of constant and intermittently flashing light barriers in guiding young silver salmon. University of Washington, School of Fisheries, Seattle, Technical Report No. 22 (March 1956).

Fields, P.E., and Murray, A.K. 1956. The response of young silver salmon to a light barrier after three levels of light adaptation. University of Washington, School of Fisheries, Technical Report No. 27.

Fields, P.E.; Adkins, R.J.; and Finger, C.L. 1954. The swimming ability of immature silver salmon (Oncorhynchus kisutch) measured in an experimental flume. University of Washington, School of Fisheries, Technical Report No. 9.

_____. 1955. The effect of electric lights upon the downstream passage of three species of adult salmon through the University of Washington fish ladder. University of Washington, School of Fisheries, Technical Report No. 12.

Fields, P.E.; Finger, C.L.; and Verhoeven, L.A. 1954a. The use of a chain barrier to guide young salmon. University of Washington, School of Fisheries, Technical Report No. 1.

_____. 1954b. The effect of electric shock upon the light avoiding behavior of young silver and blueback salmon. University of Washington, School of Fisheries, Technical Report No. 3.

Fields, P.E.; Adkins, R.J.; Finger, C.L.; and Carney, R.E. 1955. The reaction of young silver salmon and steelhead trout to infrared light barriers. University of Washington, School of Fisheries, Technical Report No. 14.

Fields, P.E.; Finger, C.L.; Pyke, R.; and Adkins, R.J. 1954. Factors influencing the efficiency of light barriers in the guidance of young salmonids. University of Washington, School of Fisheries, Technical Report No. 8.

Fields, P.E.; Adkins, R.J.; Carney, R.E.; Finger, C.L.; and Johnson, D.E. 1955. The effect of four light conditions upon the impingement of year plus steelhead trout, chinook and silver salmon. University of Washington, School of Fisheries, Technical Report No. 18.

Fields, P.E.; Murray, A.K.; Johnson, D.E.; and Finger, C.L. 1958. Guiding salmon by light repulsion and attraction in fast and turbid water. University of Washington, School of Fisheries, Technical Reports Nos. 36 and 41.

Fields, P.E.; Finger, C.L.; Adkins, R.J.; Carney, R.E.; and Pyke, R. 1955a. A factorial study of the response of steelhead trout, chinook and silver salmon fingerlings to light barriers in moving water. University of Washington, School of Fisheries, Technical Report No. 11.

_____. 1955b. A factorial study of the response to steelhead trout, chinook and silver salmon fingerlings to chain barriers in moving water. University of Washington, School of Fisheries, Tech. Report No. 13.

Fields, P.E.; Johnson, D.E.; Finger, C.L.; Adkins, R.J.; and Carney, R.E. 1955a. The effect of various electrical treatments upon equilibrium, swimming ability, and light avoidance of silver salmon. University of Washington, School of Fisheries, Technical Report No. 20.

_____. 1955b. A field test of the effectiveness of two intensities of shaded and unshaded lights in guiding downstream migrant salmon. University of Washington, School of Fisheries, Technical Report No. 21.

Fraser, W.G. 1974. Manager of Engineering, PACECO, Alameda, Calif., letter to Joe Polefka of Stone & Webster Engineering Corp., dated January 30, 1974.

Gunsolus, R.T. and Eicher, G.J. 1970. Evaluation of fish passage facilities at the North Fork Project on the Clackamas River in Oregon. The Fish Commission of Oregon and Portland General Electric Company, September 1970.

Harris, W. 1974. Telephone conversation with Y. Mussalli and E.P. Taft of Stone & Webster Engineering Corp., January 22, 1974.

Harris, G.G., and Bergeijk, W.A. van. 1962. Evidence that the lateral-line organ responds to near-field displacements of sound sources in water. Jour. Acoust. Soc. Amer. 34:1831–1841.

Kerr, J.E. 1953. Studies on fish preservation at the Contra Costa Steam Plant of the Pacific Gas and Electric Co. California Fish and Game, Bulletin No. 92.

Kupka, K.H. 1966. A downstream migrant diversion screen. The Canadian Fish Culturalist, No. 37, Sept. 1966.

Lake Michigan Intake Committee. 1973. Lake Michigan intakes: Report on the best technology available by Lake Michigan Cooling Water Intake Technical Committee, 1973.

Lawler, Matusky, and Skelly Engineers. 1974. 1973 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

_____. 1975. 1974 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

_____. 1976. 1975 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

Lethlean, N.G. 1953. An investigation into the design and performance of electric fish screens and an electric fish counter. Trans. Roy. Soc. Edin. 53, Pt. 2, (13):479–526.

Mayo, R.D.; James, W.T.; and Congleton, J.L. 1972. A rational approach to the design of power plants intake fish screens using both physical and behavioral screening methods. Kramer, Chin, and Mayo Consulting Eng., Technical Reprint No. 15 (September 1972).

Mowbray, W.H., and Saila, S.B. 1973. Millstone Point intake barrier design study - Preliminary Report.

Nakatani, R.E. 1954. The average specific electrical resistance of some salmonids. School of Fisheries, University of Washington, Technical Report No. 4.

Pavlov, D.S. 1969. Entrapment of fish fingerlings in pumping installations as related to features of their behavior and orientation in the stream of water. Problems in Ichthyology, Amer. Fish. Soc. 9(2):237–243.

Riesbol, H.S., and Gear, P.J.L. 1972. Application of mechanical systems to alleviation of intake entrapment problems. Presented at Atomic Industrial Forum Conference on Water Quality Considerations, Washington, D.C.

Schuler, V.J. 1973. Experimental studies in guiding marine fishes of Southern California with screens and louvers. Ichthyol. Assoc., Bulletin 8 (February 1973).

Schuler, V.J., and Larson, L.E. 1974. Experimental studies evaluating aspects of fish behavior as parameters in the design of generating station intake systems. Southern California Edison Company and Ichthyological Associates, Inc., Middletown, Delaware.

Sonnichsen, J.C.; Bentley, E.C.; Bailey, G.F.; and Nakatani R.E. 1973. A review of thermal power plant intake structure design and related environmental considerations. Handford Eng. Devel. Lab.

Stone & Webster Engineering Corporation (S&W). 1975. Studies to alleviate potential fish entrapment problems - summary report, 1973–1974 efforts, Nine Mile Point Nuclear Station Unit 2. Prepared for Niagara Mohawk Power Corporation (February 1975).

_____. 1976. Studies to alleviate potential fish entrapment problems at Lake Ontario power plant intakes. First Interim Progress Report. Prepared for Niagara Mohawk Power Corporation and Rochester Gas & Electric Corporation (April 1976).

Taft, E.P.; Hofmann, P.; Eisele, P.J.; and Horst, T.J. 1976. An experimental approach to the design of systems for alleviating fish impingement of existing and proposed power plant intake structures. Presented at the Third National Workshop on Entrainment and Impingement, New York City, February 1976.

Thompson, J.S. and Paulik, G.J. 1967. An evaluation of louvers and bypass facilities for guiding seaward migrant salmonid past Mayfield Dam in West Washington. Washington Department of Fisheries, Olympia, Washington.

U.S. Environmental Protection Agency (EPA). 1976. Development document for proposed best technology available for minimizing adverse environmental impact of cooling water intake structures.

Hudson River Power Plants Entrainment Abundance And Survival Raw Data Summaries 1976

Roseton Generating Station

Danskammer Point Generating Station

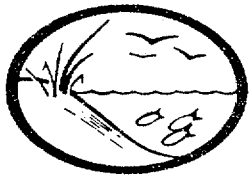
Bowline Point Generating Station

Lovett Generating Station

Prepared for

Central Hudson Gas & Electric Corporation

Orange & Rockland Utilities, Inc.



Prepared by
ECOLOGICAL ANALYSTS, INC.

CONTENTS

		Page
1.	ENTRAINMENT SURVIVAL RAW DATA SUMMARIES	
1.1	ROSETON GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976	1.1-1 - 1.1-99
1.2	BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976	1.2-1 - 1.2-88
1.3	LOVETT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976	1.3-1 - 1.3-36
2.	ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES	
2.1	ROSETON GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976	2.1-1 - 2.1-70
2.2	BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976	2.2-1 - 2.2-72
2.3	LOVETT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976	2.3-1 - 2.3-29
3.	ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES	
3.1	ROSETON GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (PUMP), 1976	3.1-1 - 3.1-77
3.2	BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA	3.2-1 - 3.2-62

SUMMARIES (NETS AND MANIFOLD PUMP), 1976

3.3 BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (DISCHARGE PUMP), 1976 3.3-1 - 3.3-63

3.4 LOVETT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1976 3.4-1 - 3.4-35

1. Entrainment Survival Raw Data Summaries

1.1 ROSETON GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/25/76	IN	00:01	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:42	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:42	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:59	3	X	153.	1.7	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:39	2	X	172.	1.4	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:06	2	X	168.	1.8	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:43	2	X	166.	2.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	17:50	3	X	178.	1.5	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:16	4	X	194.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	DI	21:26	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:08	3	X	184.	1.6	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:08	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:02	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:02	3	X	-9999.	1.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:42	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:42	3	X	-9999.	2.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:30	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:30	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:11	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:11	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:57	3	X	184.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:57	3	X	-9999.	2.4	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:23	4	X	200.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:23	4	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:06	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:06	4	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:51	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:51	4	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:39	4	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:39	4	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:18	4	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:18	4	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:03	4	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:03	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:44	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:44	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	22:40	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:40	4	X	-9999.	1.5	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	IN	23:20	4	X	191.	1.6	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:20	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	00:10	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/76	DI	19:50	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:02	3	X	-9999.	2.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:02	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:55	3	X	-9999.	2.4	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:55	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	23:36	3	X	203.	2.1	26.5	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:36	3	X	-9999.	2.1	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	00:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:29	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:09	3	X	-9999.	1.8	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/08/76	DI	01:09	3	X	-9999.	1.8	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:57	3	X	202.	1.6	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	01:57	3	X	-9999.	1.6	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:31	3	X	200.	1.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:31	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:25	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:25	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:06	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:48	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:48	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:28	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:28	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:12	3	X	203.	2.2	25.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	21:12	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:57	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:57	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:40	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:40	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:23	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	DI	23:23	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:00	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:00	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:47	3	X	-9999.	2.0	26.0	4	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0
07/09/76	DI	00:47	3	X	-9999.	2.0	33.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	IN	01:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	01:29	3	X	-9999.	1.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/09/76	IN	02:07	2	X	205.	1.8	25.2	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/09/76	DI	02:07	2	X	-9999.	1.8	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:34	3	X	204.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:34	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:15	3	X	-9999.	1.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:15	3	X	-9999.	1.3	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:56	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:56	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:34	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:34	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:10	3	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:10	3	X	-9999.	1.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:49	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:49	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:31	3	X	-9999.	1.5	25.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/12/76	DI	21:31	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:12	3	X	191.	1.7	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:12	3	X	-9999.	1.7	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	IN	22:49	3	X	-9999.	1.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	DI	22:49	3	X	-9999.	1.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	IN	23:31	3	X	-9999.	2.0	25.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/12/76	DI	23:31	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:12	3	X	-9999.	2.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:12	3	X	-9999.	2.1	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:54	3	X	-9999.	2.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	DI	00:54	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	01:30	3	X	-9999.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	01:30	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	02:10	3	X	198.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	02:10	3	X	-9999.	2.3	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:36	3	X	190.	1.6	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:36	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:12	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:12	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:52	3	X	-9999.	1.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:52	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:30	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:30	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:05	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:05	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:45	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:45	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:21	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:21	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:00	3	X	184.	1.4	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:00	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:42	3	X	-9999.	1.7	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/13/76	DI	22:42	3	X	-9999.	1.7	32.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/13/76	IN	23:19	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:19	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:56	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:56	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:34	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:34	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:11	3	X	-9999.	2.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	01.11	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:48	3	X	187.	2.3	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/14/76	DI	01:48	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:33	3	X	187.	1.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:33	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:09	3	X	-9999.	1.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:09	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:49	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:49	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:28	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:28	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:06	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:06	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:42	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:42	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:26	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:26	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:00	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:00	3	X	179.	1.3	35.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:39	3	X	-9999.	1.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:39	3	X	-9999.	1.3	35.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:14	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:16	3	X	-9999.	1.4	35.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	IN	23:57	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:57	3	X	-9999.	1.5	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	00:34	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:34	3	X	-9999.	1.8	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	01:15	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:15	3	X	-9999.	1.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	01:53	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:53	3	X	183.	2.0	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	17:59	3	X	-9999.	2.1	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:59	3	X	-9999.	2.1	31.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	18:38	3	X	169.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
						1.9	36.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
						1.7	25.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION (F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:35	3	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:35	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:13	3	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:13	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	181.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:46	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:46	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:40	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:55	3	X	181.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/16/76	DI	01:55	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/19/76	DI	20:01	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:40	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	20:40	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	21:23	3	X	177.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	21:23	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:00	3	X	-9999.	1.7	25.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/19/76	DI	22:00	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:38	3	X	-9999.	1.6	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/19/76	DI	22:38	3	X	-9999.	1.6	36.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/19/76	IN	23:18	3	X	-9999.	1.5	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	23:18	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:57	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:57	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	00:35	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	00:35	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:10	3	X	-9999.	1.3	25.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/20/76	DI	01:10	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:54	3	X	175.	1.3	25.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/20/76	DI	01:54	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	17:32	3	X	183.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	17:32	3	X	-9999.	1.8	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:10	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:10	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:45	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:45	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	19:25	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	19:25	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:04	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:04	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:43	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:43	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:20	3	X	-9999.	2.0	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/20/76	DI	21:20	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:59	3	X	185.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	21:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	22:51	3	X	-9999.	1.8	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/20/76	DI	22:51	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	23:33	3	X	-9999.	1.6	26.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	0	3	0
07/20/76	DI	23:33	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:15	3	X	-9999.	1.6	25.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	0
07/21/76	DI	00:15	3	X	-9999.	1.6	32.0	2	0	0	2	0	2	0	1	1	1	1	1	1	1	1	1	1	1
07/21/76	IN	00:53	3	X	-9999.	1.5	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/21/76	DI	00:53	3	X	-9999.	1.5	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	01:33	3	X	-9999.	1.4	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/21/76	DI	01:33	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	02:11	3	X	191.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	02:11	3	X	-9999.	1.4	31.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/21/76	IN	17:29	3	X	177.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	17:29	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:06	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:52	3	X	-9999.	1.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/21/76	DI	18:52	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	19:30	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	19:30	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:06	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:06	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:44	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:44	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	21:23	3	X	183.	2.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	21:23	3	X	-9999.	2.0	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/21/76	IN	22:04	3	X	-9999.	2.0	25.5	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	0
07/21/76	DI	22:04	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:43	3	X	-9999.	1.9	25.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/21/76	DI	22:43	3	X	-9999.	1.9	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	IN	23:25	3	X	-9999.	1.7	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/21/76	DI	23:25	3	X	-9999.	1.7	36.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/21/76	IN	23:55	3	X	-9999.	1.7	25.0	4	0	0	4	0	4	0	4	0	4	0	4	0	3	1	3	1
07/21/76	DI	23:53	3	X	-9999.	1.7	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	IN	00:34	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	00:34	3	X	-9999.	1.5	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/22/76	IN	01:10	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	01:50	3	X	198.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:50	3	X	-9999.	1.4	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	IN	17:24	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	17:24	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:01	3	X	179.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:01	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:46	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:46	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:22	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:22	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:59	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:59	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:38	3	X	-9999.	2.1	26.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/22/76	DI	20:38	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:16	3	X	-9999.	2.2	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/22/76	DI	21:16	3	X	-9999.	2.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:55	3	X	187.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:55	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:31	3	X	-9999.	2.2	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/22/76	DI	22:31	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:07	3	X	-9999.	2.1	26.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/22/76	DI	23:07	3	X	-9999.	2.1	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	23:47	3	X	-9999.	2.0	26.0	3	1	0	3	1	3	1	3	1	3	1	3	1	3	1	3	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	6	0	0	6	0	6	0	6	0	6	0	6	0	5	1	4	2
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:53	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	178.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	DI	01:25	3	X	-9999.	2.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	02:05	3	X	177.	2.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	02:05	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:38	4	X	178.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:38	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:16	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:16	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:54	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:54	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:37	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:37	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:13	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:13	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:53	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:53	4	X	-9999.	1.5	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:33	4	X	-9999.	1.8	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/27/76	DI	21:33	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:13	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:13	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:53	4	X	173.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/27/76	DI	22:53	4	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	23:25	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:25	4	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:05	4	X	-9999.	2.3	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/28/76	DI	00:05	4	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:45	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:45	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	01:25	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	01:25	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	02:01	4	X	176.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	02:01	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:32	4	X	177.	1.5	26.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOI

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	DI	17:32	4	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:08	4	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:08	4	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:48	4	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:48	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:26	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:26	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:05	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:05	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:42	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:42	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:22	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:22	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:01	3	X	169.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:01	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:39	3	X	-9999.	1.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/28/76	DI	22:39	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:12	3	X	-9999.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/28/76	DI	23:12	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:50	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:50	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:25	3	X	-9999.	2.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/29/76	DI	00:25	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:05	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:05	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:42	3	X	177.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:42	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:38	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:38	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:11	3	X	172.	1.6	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:11	3	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:51	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	DI	18:51	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:30	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:30	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:13	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:12	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:45	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	21:25	3	X	170.	1.3	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	21:25	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	22:45	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:45	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	23:25	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:25	3	X	-9999.	1.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/30/76	IN	00:15	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:15	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:54	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:54	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	01:31	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	01:31	3	X	-9999.	2.3	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	02:08	3	X	172.	2.3	25.2	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/30/76	DI	02:08	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/14/76	IN	23:47	3	X	129.	1.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:47	3	X	-9999.	1.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	01:38	3	X	-9999.	2.1	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:38	3	X	-9999.	2.1	24.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/15/76	IN	17:52	3	X	132.	1.7	20.4	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/15/76	DI	17:52	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	19:14	3	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:35	3	X	-9999.	1.2	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	DI	21:35	3	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:46	3	X	132.	1.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:46	3	X	-9999.	1.2	27.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/16/76	IN	00:09	3	X	-9999.	1.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:09	3	X	-9999.	1.6	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	01:18	3	X	135.	1.9	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	01:18	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:48	2	X	134.	2.0	20.9	2	0	0	2	0	1	1	0	2	0	2	0	2	0	2	0	2
06/16/76	DI	17:48	2	X	-9999.	2.0	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	19:12	2	X	-9999.	1.7	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:12	2	X	-9999.	1.7	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	20:18	2	X	-9999.	1.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:18	2	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	00:19	2	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:19	2	X	-9999.	1.4	28.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/17/76	IN	01:52	2	X	149.	1.9	20.7	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	01:52	2	X	-9999.	1.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:37	2	X	145.	1.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:37	2	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:19	2	X	-9999.	1.7	21.0	1	1	0	2	0	2	0	2	0	1	1	1	1	1	1	1	1
06/17/76	DI	19:19	2	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:34	2	X	-9999.	1.5	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	22:21	2	X	198.	1.3	21.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:21	2	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/76	IN	00:17	2	X	-9999.	1.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:17	2	X	-9999.	1.3	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	01:24	2	X	219.	1.5	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	01:24	2	X	-9999.	1.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	17:38	3	X	156.	1.8	23.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	17:38	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	18:26	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	18:26	3	X	-9999.	1.9	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/21/76	IN	19:21	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:21	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:12	3	X	-9999.	2.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:12	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:51	3	X	-9999.	2.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:51	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:41	3	X	146.	2.1	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	21:41	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	22:44	3	X	-9999.	1.9	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/21/76	DI	22:44	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:36	3	X	-9999.	1.8	22.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/21/76	DI	23:36	3	X	-9999.	1.8	32.0	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/22/76	IN	00:24	3	X	-9999.	1.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	00:24	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	01:10	3	X	-9999.	1.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	01:10	3	X	-9999.	1.5	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	02:00	3	X	141.	1.5	22.5	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	DI	02:00	3	X	-9999.	1.5	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	IN	17:38	3	X	152.	1.6	22.8	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	17:38	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:21	3	X	-9999.	1.8	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	18:21	3	X	-9999.	1.8	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	IN	19:01	3	X	-9999.	1.8	23.5	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	19:01	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/22/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:42	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:22	3	X	-9999.	2.0	24.0	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	DI	20:22	3	X	-9999.	2.0	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/22/76	IN	21:04	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:04	3	X	-9999.	2.1	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	IN	21:45	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:45	3	X	-9999.	2.1	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	IN	22:30	3	X	176.	2.0	23.6	4	0	0	4	0	3	1	1	3	1	3	0	4	0	4	0	4
06/22/76	DI	22:30	3	X	-9999.	2.0	33.0	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/22/76	IN	23:09	3	X	-9999.	2.0	23.0	5	0	3	5	3	3	5	1	7	1	7	1	7	1	7	0	8
06/22/76	DI	23:09	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:50	3	X	-9999.	1.9	23.0	4	0	0	1	3	1	3	0	4	0	4	0	4	0	4	0	4
06/22/76	DI	23:50	3	X	-9999.	1.9	31.0	1	0	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/23/76	IN	00:29	3	X	-9999.	1.7	23.0	5	1	0	5	1	3	3	2	4	2	4	0	6	0	6	0	6
06/23/76	DI	00:29	3	X	-9999.	1.7	30.0	4	0	6	3	7	3	7	3	7	3	7	3	7	2	8	1	9
06/23/76	IN	01:09	3	X	-9999.	1.6	23.0	3	0	0	2	1	2	1	2	1	2	1	2	1	2	1	0	3
06/23/76	DI	01:09	3	X	-9999.	1.6	28.0	2	0	2	2	2	2	2	2	2	2	2	2	2	1	3	1	3
06/23/76	IN	02:04	3	X	187.	1.5	23.5	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	02:04	3	X	-9999.	1.5	28.0	1	0	1	1	1	1	1	1	1	0	2	0	2	0	2	0	2
06/23/76	IN	17:50	3	X	152.	1.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:50	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:03	3	X	-9999.	1.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:03	3	X	-9999.	1.7	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:20	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:20	3	X	-9999.	2.0	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	21:02	3	X	-9999.	2.1	24.0	1	0	3	1	3	0	4	0	4	0	4	0	4	0	4	0	4
06/23/76	DI	21:03	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	21:48	3	X	149.	2.2	23.9	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/23/76	DI	21:48	3	X	-9999.	2.2	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	IN	22:26	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:26	3	X	-9999.	2.2	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	IN	23:06	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:06	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:43	3	X	-9999.	2.1	24.0	1	0	1	1	1	1	1	1	1	1	1	0	2	0	2	0	2
06/23/76	DI	23:43	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:19	3	X	-9999.	2.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	00:19	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:59	3	X	-9999.	1.8	24.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/24/76	DI	00:59	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:38	3	X	148.	1.7	23.3	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	01:38	3	X	-9999.	1.7	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	17:45	3	X	156.	1.3	23.7	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	17:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:25	3	X	-9999.	1.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:25	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:09	3	X	-9999.	1.6	24.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	19:09	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:54	3	X	-9999.	1.8	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	19:54	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:35	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:35	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:19	3	X	-9999.	2.1	24.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	21:19	3	X	-9999.	2.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	22:02	3	X	155.	2.1	24.1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	22:02	3	X	-9999.	2.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	22:44	3	X	-9999.	2.2	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	22:44	3	X	-9999.	2.2	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	23:22	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:22	3	X	-9999.	2.1	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/25/76	IN	00:01	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	IN	00:42	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:42	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:59	3	X	153.	1.7	23.7	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:39	2	X	172.	1.4	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:06	2	X	168.	1.8	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:43	2	X	166.	2.3	24.9	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	17:50	3	X	178.	1.5	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:16	4	X	194.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	2	0	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	3	0	0	3	0	3	0	2	1	2	1	2	1	1	2	1	2	1	2
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	DI	21:26	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:08	3	X	184.	1.6	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:08	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:02	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:02	3	X	-9999.	1.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:42	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:42	3	X	-9999.	2.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:30	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:30	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:11	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:11	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:57	3	X	184.	2.4	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/01/76	DI	01:57	3	X	-9999.	2.4	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:23	4	X	200.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:23	4	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:06	4	X	-9999.	1.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	18:06	4	X	-9999.	1.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	18:51	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:51	4	X	-9999.	1.8	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/01/76	IN	19:39	4	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:39	4	X	-9999.	1.7	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	20:18	4	X	-9999.	1.6	25.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
07/01/76	DI	20:18	4	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:03	4	X	-9999.	1.5	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	21:03	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:44	4	X	-9999.	1.5	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	21:44	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	22:40	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:40	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:20	4	X	191.	1.6	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:20	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	00:10	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	02:10	4	X	189.	2.2	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:50	4	X	-9999.	2.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:30	3	X	-9999.	2.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:10	3	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:52	3	X	-9999.	2.3	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	21:45	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	22:35	3	X	-9999.	2.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:32	3	X	209.	1.8	26.4	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:58	3	X	207.	1.4	26.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:58	3	X	-9999.	1.4	33.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKN OWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/76	DI	19:50	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:02	3	X	-9999.	2.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:02	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:55	3	X	-9999.	2.4	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:55	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	23:36	3	X	203.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:36	3	X	-9999.	2.1	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:29	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:09	3	X	-9999.	1.8	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	01:09	3	X	-9999.	1.8	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:57	3	X	202.	1.6	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	01:57	3	X	-9999.	1.6	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:31	3	X	200.	1.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:31	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:25	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:25	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:06	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:48	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:48	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:28	3	X	-9999.	2.1	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	20:28	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:12	3	X	203.	2.2	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:12	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:57	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:57	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:40	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:40	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:23	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	DI	23:23	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:00	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:00	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:47	3	X	-9999.	2.0	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	DI	00:47	3	X	-9999.	2.0	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	IN	01:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	01:29	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	02:07	2	X	205.	1.8	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	02:07	2	X	-9999.	1.8	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:34	3	X	204.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:34	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:15	3	X	-9999.	1.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:15	3	X	-9999.	1.3	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:56	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:56	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:34	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:34	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:10	3	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:10	3	X	-9999.	1.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:49	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:49	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	21:31	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:31	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:12	3	X	191.	1.7	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:12	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:49	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:49	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:31	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:31	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:12	3	X	-9999.	2.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:12	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:54	3	X	-9999.	2.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/14/76	DI	01:48	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:33	3	X	187.	1.8	24.8	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
07/14/76	DI	17:33	3	X	-9999.	1.8	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	18:09	3	X	-9999.	1.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:09	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:49	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:49	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:28	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:28	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:06	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:06	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:42	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:42	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:26	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:26	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:00	3	X	179.	1.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:00	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:39	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:39	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:16	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:16	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:57	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:57	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:34	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:34	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	01:15	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:15	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	01:53	3	X	183.	2.1	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:53	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:59	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:38	3	X	189.	1.7	25.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:35	3	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:35	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:13	3	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:13	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	181.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:46	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:46	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:40	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:55	3	X	181.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:55	3	X	-9999	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/76	IN	00:17	2	X	-9999.	1.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:17	2	X	-9999.	1.3	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	01:24	2	X	219.	1.5	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	01:24	2	X	-9999.	1.5	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	17:38	3	X	156.	1.8	23.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	17:38	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	18:26	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	18:26	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:21	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:21	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:12	3	X	-9999.	2.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:12	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:51	3	X	-9999.	2.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:51	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:41	3	X	146.	2.1	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	21:41	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	22:44	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	22:44	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:36	3	X	-9999.	1.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:36	3	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	00:24	3	X	-9999.	1.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	00:24	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	01:10	3	X	-9999.	1.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	01:10	3	X	-9999.	1.5	30.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	IN	02:00	3	X	141.	1.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	02:00	3	X	-9999.	1.5	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	17:38	3	X	152.	1.6	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:38	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:21	3	X	-9999.	1.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:21	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:01	3	X	-9999.	1.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:01	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	21:48	3	X	149.	2.2	23.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:48	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	22:26	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:26	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:06	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:06	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:43	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:43	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:19	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:19	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:59	3	X	-9999.	1.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:59	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:38	3	X	148.	1.7	23.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	01:38	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:45	3	X	156.	1.3	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:25	3	X	-9999.	1.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:25	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:09	3	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:09	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:54	3	X	-9999.	1.8	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	DI	19:54	3	X	-9999.	1.8	34.0	1	1	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/24/76	IN	20:35	3	X	-9999.	1.9	24.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	20:35	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:19	3	X	-9999.	2.1	24.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/24/76	DI	21:19	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:02	3	X	155.	2.1	24.1	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	22:02	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:44	3	X	-9999.	2.2	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	DI	22:44	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:22	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:22	3	X	-9999.	2.1	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	IN	22:16	4	X	194.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	DI	21:26	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:08	3	X	184.	1.6	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:08	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:02	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:02	3	X	-9999.	1.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:42	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:42	3	X	-9999.	2.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:30	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:30	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:11	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:11	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:57	3	X	184.	2.4	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	01:57	3	X	-9999.	2.4	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:23	4	X	200.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:23	4	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:06	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:06	4	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:51	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:51	4	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:39	4	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:39	4	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:18	4	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:18	4	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:03	4	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:03	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:44	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:44	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	22:40	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:40	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:20	4	X	191.	1.6	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:20	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	00:10	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	02:10	4	X	189.	2.2	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:50	4	X	-9999.	2.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:30	3	X	-9999.	2.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:10	3	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	20:52	3	X	-9999.	2.3	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	21:45	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	22:35	3	X	-9999.	2.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:32	3	X	209.	1.8	26.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:58	3	X	207.	1.4	26.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:58	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/76	DI	19:50	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:02	3	X	-9999.	2.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:02	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:55	3	X	-9999.	2.4	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:55	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	23:36	3	X	203.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:36	3	X	-9999.	2.1	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:29	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:09	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	01:09	3	X	-9999.	1.8	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:57	3	X	202.	1.6	25.1	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/08/76	DI	01:57	3	X	-9999.	1.6	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:31	3	X	200.	1.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:31	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:25	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:25	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:06	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:48	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:48	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:28	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:28	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:12	3	X	203.	2.2	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:12	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:57	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:57	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:40	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:40	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:23	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY--STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UNHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	DI	23:23	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:00	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:00	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:47	3	X	-9999.	2.0	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/09/76	DI	00:47	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	01:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	01:29	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	02:07	2	X	205.	1.8	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	02:07	2	X	-9999.	1.8	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:34	3	X	204.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:34	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:15	3	X	-9999.	1.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:15	3	X	-9999.	1.3	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:56	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:56	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:34	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:34	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:10	3	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:10	3	X	-9999.	1.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:49	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:49	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:31	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:31	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:12	3	X	191.	1.7	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:12	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:49	3	X	-9999.	1.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	DI	22:49	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:31	3	X	-9999.	2.0	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	DI	23:31	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:12	3	X	-9999.	2.1	25.5	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/13/76	DI	00:12	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:54	3	X	-9999.	2.2	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)
ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	DI	00:54	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	01:30	3	X	-9999.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	01:30	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	02:10	3	X	198.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	02:10	3	X	-9999.	2.3	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:36	3	X	190.	1.6	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:36	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:12	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:12	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:52	3	X	-9999.	1.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:52	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:30	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:30	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:05	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:05	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:45	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:45	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:21	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:21	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:00	3	X	184.	1.4	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:00	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:42	3	X	-9999.	1.7	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/13/76	DI	22:42	3	X	-9999.	1.7	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:19	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:19	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:56	3	X	-9999.	2.0	25.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/13/76	DI	23:56	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:34	3	X	-9999.	2.1	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	00:34	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:11	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	01:11	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:48	3	X	187.	2.3	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/14/76	DI	01:48	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:33	3	X	187.	1.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:33	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:09	3	X	-9999.	1.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:09	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:49	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:49	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:28	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:28	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:06	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:06	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:42	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:42	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:26	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:26	3	X	-9999.	1.3	35.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	IN	22:00	3	X	179.	1.3	24.2	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/14/76	DI	22:00	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:39	3	X	-9999.	1.4	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	22:39	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:16	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:16	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:57	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:57	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:34	3	X	-9999.	1.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	DI	00:34	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	01:15	3	X	-9999.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	DI	01:15	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	01:53	3	X	183.	2.1	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:53	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:59	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:38	3	X	189.	1.7	25.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:35	3	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:35	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:13	3	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:13	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	181.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	IN	23:46	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:46	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:40	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:55	3	X	181.	2.0	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/16/76	DI	01:55	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV./ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/19/76	DI	20:01	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:40	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	20:40	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	21:23	3	X	177.	1.8	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/19/76	DI	21:23	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:00	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:00	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:38	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:38	3	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:18	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:18	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:57	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:57	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	00:35	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	00:35	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:10	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	01:10	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:54	3	X	175.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	01:54	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	17:32	3	X	183.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	17:32	3	X	-9999.	1.8	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:10	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:10	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:45	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:45	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	19:25	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	19:25	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:04	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:04	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:43	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:43	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:20	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/20/76	DI	21:20	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:59	3	X	185.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	21:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	22:51	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	22:51	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	23:33	3	X	-9999.	1.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	23:33	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:15	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	00:15	3	X	-9999.	1.6	32.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	1
07/21/76	IN	00:53	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	00:53	3	X	-9999.	1.5	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	01:33	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	01:33	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	02:11	3	X	191.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	02:11	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	17:29	3	X	177.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	17:29	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:06	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:52	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:52	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	19:30	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	19:30	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:06	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:06	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:44	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:44	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	21:23	3	X	183.	2.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	21:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:04	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	22:04	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:43	3	X	-9999.	1.9	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/21/76	DI	22:43	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	23:25	3	X	-9999.	1.7	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/21/76	DI	23:25	3	X	-9999.	1.7	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	IN	23:55	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	23:53	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:34	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	00:34	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	01:10	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:10	3	X	-9999.	1.5	33.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	IN	01:50	3	X	198.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:50	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	17:24	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	17:24	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:01	3	X	179.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:01	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:46	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:46	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:22	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:22	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:59	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:59	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:38	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	20:38	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:16	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:16	3	X	-9999.	2.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:55	3	X	187.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:55	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:31	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	22:31	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:07	3	X	-9999.	2.1	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/22/76	DI	23:07	3	X	-9999.	2.1	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	23:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:53	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	173.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	DI	17:32	4	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:08	4	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:08	4	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:48	4	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:48	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:26	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:26	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:05	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:05	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:42	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:42	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:22	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:22	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:01	3	X	169.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:01	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:39	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:39	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:12	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:12	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:50	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:50	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:25	3	X	-9999.	2.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/29/76	DI	00:25	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:05	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:05	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:42	3	X	177.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:42	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:38	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:38	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:11	3	X	172.	1.6	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:11	3	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:51	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEID-SIZE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/14/76	IN	23:47	3	X	129.	1.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:47	3	X	-9999.	1.7	27.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	01:38	3	X	-9999.	2.1	19.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	DI	01:38	3	X	-9999.	2.1	24.0	2	1	1	2	2	2	2	2	2	0	4	0	4	0	4	0	4
06/15/76	IN	17:52	3	X	132.	1.7	20.4	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	DI	17:52	3	X	-9999.	1.7	30.0	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/15/76	IN	19:14	3	X	-9999.	1.4	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/15/76	IN	21:35	3	X	-9999.	1.2	20.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/15/76	DI	21:35	3	X	-9999.	1.2	27.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/15/76	IN	22:46	3	X	132.	1.2	18.7	1	2	5	1	7	0	8	0	8	0	8	0	8	0	8	0	8
06/15/76	DI	22:46	3	X	-9999.	1.2	27.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	00:09	3	X	-9999.	1.6	20.0	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/16/76	DI	00:09	3	X	-9999.	1.6	27.0	0	3	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/16/76	IN	01:18	3	X	135.	1.9	19.7	3	6	32	2	39	1	40	1	40	0	41	0	41	0	41	0	41
06/16/76	DI	01:18	3	X	-9999.	1.9	26.0	13	1	8	5	17	5	17	4	18	3	19	2	20	1	21	0	22
06/16/76	IN	17:48	2	X	134.	2.0	20.9	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/76	DI	17:48	2	X	-9999.	2.0	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	19:12	2	X	-9999.	1.7	21.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/16/76	DI	19:12	2	X	-9999.	1.7	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/16/76	IN	20:18	2	X	-9999.	1.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:18	2	X	-9999.	1.5	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/76	IN	00:19	2	X	-9999.	1.4	20.0	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/17/76	DI	00:19	2	X	-9999.	1.4	28.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/17/76	IN	01:52	2	X	149.	1.9	20.7	0	4	9	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/17/76	DI	01:52	2	X	-9999.	1.9	27.0	2	1	5	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/17/76	IN	17:37	2	X	145.	1.9	21.4	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/17/76	DI	17:37	2	X	-9999.	1.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	19:19	2	X	-9999.	1.7	21.0	2	1	3	3	3	0	6	0	6	0	6	0	6	0	6	0	6
06/17/76	DI	19:19	2	X	-9999.	1.7	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/17/76	DI	20:34	2	X	-9999.	1.5	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/17/76	IN	22:21	2	X	198.	1.3	21.6	1	1	11	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/17/76	DI	22:21	2	X	-9999.	1.3	33.0	0	0	20	0	20	0	20	0	20	0	20	0	20	0	20	0	20

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	N	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/76	IN	00:17	2	X	-9999.	1.3	21.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/76	DI	00:17	2	X	-9999.	1.3	29.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/18/76	IN	01:24	2	X	219.	1.5	21.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/18/76	DI	01:24	2	X	-9999.	1.5	27.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/21/76	IN	17:38	3	X	156.	1.8	23.2	3	5	5	1	12	0	13	0	13	0	13	0	13	0	13	0	13
06/21/76	DI	17:38	3	X	-9999.	1.8	33.0	0	1	10	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/21/76	IN	18:26	3	X	-9999.	1.9	23.0	2	1	6	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/21/76	DI	18:26	3	X	-9999.	1.9	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/21/76	IN	19:21	3	X	-9999.	2.0	23.0	3	0	4	1	6	0	7	0	7	0	7	0	7	0	7	0	7
06/21/76	DI	19:21	3	X	-9999.	2.0	33.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/21/76	IN	20:12	3	X	-9999.	2.1	23.0	3	1	3	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/21/76	DI	20:12	3	X	-9999.	2.1	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/21/76	IN	20:51	3	X	-9999.	2.1	23.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/21/76	DI	20:51	3	X	-9999.	2.1	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/21/76	IN	21:41	3	X	176.	2.1	23.1	6	1	2	1	8	0	9	0	9	0	9	0	9	0	9	0	9
06/21/76	DI	21:41	3	X	-9999.	2.1	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/21/76	IN	22:44	3	X	-9999.	1.9	23.0	2	1	4	1	6	0	7	0	7	0	7	0	7	0	7	0	7
06/21/76	DI	22:44	3	X	-9999.	1.9	32.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/21/76	IN	23:36	3	X	-9999.	1.8	22.0	3	1	4	1	7	0	8	0	8	0	8	0	8	0	8	0	8
06/21/76	DI	23:36	3	X	-9999.	1.8	32.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/22/76	IN	00:24	3	X	-9999.	1.6	22.0	1	3	3	1	6	0	7	0	7	0	7	0	7	0	7	0	7
06/22/76	DI	00:24	3	X	-9999.	1.6	31.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/22/76	IN	01:10	3	X	-9999.	1.5	22.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/22/76	DI	01:10	3	X	-9999.	1.5	30.0	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/22/76	IN	02:00	3	X	141.	1.5	22.5	3	2	5	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/22/76	DI	02:00	3	X	-9999.	1.5	29.0	1	2	7	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/22/76	IN	17:38	3	X	152.	1.6	23.8	1	2	1	1	3	0	4	0	4	0	4	0	4	0	4	0	4
06/22/76	DI	17:38	3	X	-9999.	1.6	32.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/22/76	IN	18:21	3	X	-9999.	1.8	23.0	5	4	5	4	10	0	14	0	14	0	14	0	14	0	14	0	14
06/22/76	DI	18:21	3	X	-9999.	1.8	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/22/76	IN	19:01	3	X	-9999.	1.8	23.5	3	3	5	1	10	0	11	0	11	0	11	0	11	0	11	0	11
06/22/76	DI	19:01	3	X	-9999.	1.8	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/22/76	IN	19:42	3	X	-9999.	1.9	24.0	1	2	2	1	3	1	4	1	4	0	5	0	5	0	5	0	5
06/22/76	DI	19:42	3	X	-9999.	1.9	34.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/22/76	IN	20:22	3	X	-9999.	2.0	24.0	4	0	3	3	4	1	6	0	7	0	7	0	7	0	7	0	7
06/22/76	DI	20:22	3	X	-9999.	2.0	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/22/76	IN	21:04	3	X	-9999.	2.1	24.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/22/76	DI	21:04	3	X	-9999.	2.1	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/22/76	IN	21:45	3	X	-9999.	2.1	24.0	1	2	3	1	5	0	6	0	6	0	6	0	6	0	6	0	6
06/22/76	DI	21:45	3	X	-9999.	2.1	33.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/22/76	IN	22:30	3	X	176.	2.0	23.6	6	13	11	6	24	2	28	1	29	0	30	0	30	0	30	0	30
06/22/76	DI	22:30	3	X	-9999.	2.0	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/22/76	IN	23:09	3	X	-9999.	2.0	23.0	8	3	8	5	14	1	18	0	19	0	19	0	19	0	19	0	19
06/22/76	DI	23:09	3	X	-9999.	2.0	32.0	0	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/22/76	IN	23:50	3	X	-9999.	1.9	23.0	4	2	1	4	3	2	5	0	7	0	7	0	7	0	7	0	7
06/22/76	DI	23:50	3	X	-9999.	1.9	31.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	IN	00:29	3	X	-9999.	1.7	23.0	2	5	5	2	10	2	10	2	10	2	10	1	11	1	11	1	11
06/23/76	DI	00:29	3	X	-9999.	1.7	30.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	IN	01:09	3	X	-9999.	1.6	23.0	1	0	13	0	14	0	14	0	14	0	14	0	14	0	14	0	14
06/23/76	DI	01:09	3	X	-9999.	1.6	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	02:04	3	X	187.	1.5	23.5	4	4	5	3	10	3	10	0	13	0	13	0	13	0	13	0	13
06/23/76	DI	02:04	3	X	-9999.	1.5	28.0	1	0	8	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/23/76	IN	17:50	3	X	152.	1.5	23.1	0	3	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/23/76	DI	17:50	3	X	-9999.	1.5	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/23/76	IN	18:28	3	X	-9999.	1.6	23.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	DI	18:28	3	X	-9999.	1.6	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/23/76	IN	19:03	3	X	-9999.	1.7	24.0	1	2	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	DI	19:03	3	X	-9999.	1.7	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/23/76	IN	19:42	3	X	-9999.	1.9	24.0	2	0	1	2	1	1	2	1	2	1	2	1	2	1	2	0	3
06/23/76	DI	19:42	3	X	-9999.	1.9	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	IN	20:20	3	X	-9999.	2.0	24.0	4	2	3	1	8	0	9	0	9	0	9	0	9	0	9	0	9
06/23/76	DI	20:20	3	X	-9999.	2.0	34.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/23/76	IN	21:02	3	X	-9999.	2.1	24.0	5	3	5	4	9	1	12	0	13	0	13	0	13	0	13	0	13
06/23/76	DI	21:03	3	X	-9999.	2.1	34.0	0	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	21:48	3	X	149.	2.2	23.9	6	3	4	5	8	1	12	1	12	0	13	0	13	0	13	0	13
06/23/76	DI	21:48	3	X	-9999.	2.2	33.0	0	1	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/23/76	IN	22:26	3	X	-9999.	2.2	24.0	4	11	5	2	18	0	20	0	20	0	20	0	20	0	20	0	20
06/23/76	DI	22:26	3	X	-9999.	2.2	33.0	0	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
06/23/76	IN	23:06	3	X	-9999.	2.2	24.0	4	2	7	1	12	0	13	0	13	0	13	0	13	0	13	0	13
06/23/76	DI	23:06	3	X	-9999.	2.2	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/23/76	IN	23:43	3	X	-9999.	2.1	24.0	5	8	10	3	20	0	23	0	23	0	23	0	23	0	23	0	23
06/23/76	DI	23:43	3	X	-9999.	2.1	33.0	0	2	11	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/24/76	IN	00:19	3	X	-9999.	2.0	24.0	1	2	6	1	8	0	9	0	9	0	9	0	9	0	9	0	9
06/24/76	DI	00:19	3	X	-9999.	2.0	33.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/24/76	IN	00:59	3	X	-9999.	1.8	24.0	2	5	2	4	5	0	9	0	9	0	9	0	9	0	9	0	9
06/24/76	DI	00:59	3	X	-9999.	1.8	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/24/76	IN	01:38	3	X	148.	1.7	23.3	1	4	3	1	7	0	8	0	8	0	8	0	8	0	8	0	8
06/24/76	DI	01:38	3	X	-9999.	1.7	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/24/76	IN	17:45	3	X	156.	1.3	23.7	1	3	5	1	8	0	9	0	9	0	9	0	9	0	9	0	9
06/24/76	DI	17:45	3	X	-9999.	1.3	33.0	0	1	14	0	15	0	15	0	15	0	15	0	15	0	15	0	15
06/24/76	IN	18:25	3	X	-9999.	1.4	24.0	6	9	25	4	36	2	38	2	38	2	38	2	38	1	39	1	39
06/24/76	DI	18:25	3	X	-9999.	1.4	33.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/24/76	IN	19:09	3	X	-9999.	1.6	24.0	0	2	6	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/24/76	DI	19:09	3	X	-9999.	1.6	33.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/24/76	IN	19:54	3	X	-9999.	1.8	24.0	7	5	10	6	16	0	22	0	22	0	22	0	22	0	22	0	22
06/24/76	DI	19:54	3	X	-9999.	1.8	34.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/24/76	IN	20:35	3	X	-9999.	1.9	24.0	6	12	6	0	24	0	24	0	24	0	24	0	24	0	24	0	24
06/24/76	DI	20:35	3	X	-9999.	1.9	34.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/24/76	IN	21:19	3	X	-9999.	2.1	24.0	4	3	19	0	26	0	26	0	26	0	26	0	26	0	26	0	26
06/24/76	DI	21:19	3	X	-9999.	2.1	34.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/24/76	IN	22:02	3	X	155.	2.1	24.1	4	4	15	1	22	1	22	1	22	0	23	0	23	0	23	0	23
06/24/76	DI	22:02	3	X	-9999.	2.1	34.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/24/76	IN	22:44	3	X	-9999.	2.2	24.0	3	3	14	2	18	1	19	0	20	0	20	0	20	0	20	0	20
06/24/76	DI	22:44	3	X	-9999.	2.2	34.0	0	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
06/24/76	IN	23:22	3	X	-9999.	2.1	25.0	3	8	14	1	24	0	25	0	25	0	25	0	25	0	25	0	25
06/24/76	DI	23:22	3	X	-9999.	2.1	35.0	0	0	17	0	17	0	17	0	17	0	17	0	17	0	17	0	17

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/25/76	IN	00:01	3	X	-9999.	2.1	24.0	5	9	14	2	26	2	26	2	26	1	27	1	27	1	27	0	28
06/25/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
06/24/76	IN	00:42	3	X	-9999.	2.0	24.0	5	13	8	4	22	2	24	0	26	0	26	0	26	0	26	0	26
06/25/76	DI	00:42	3	X	-9999.	2.0	33.0	0	3	10	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	3	2	6	1	10	0	11	0	11	0	11	0	11	0	11	0	11
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/25/76	IN	01:59	3	X	153.	1.7	23.7	5	2	6	2	11	0	13	0	13	0	13	0	13	0	13	0	13
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/28/76	IN	17:39	2	X	172.	1.4	25.6	2	0	1	2	1	1	2	0	3	0	3	0	3	0	3	0	3
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	3	4	5	1	11	0	12	0	12	0	12	0	12	0	12	0	12
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	2	1	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/28/76	IN	22:06	2	X	148.	1.8	24.6	4	2	5	1	10	0	11	0	11	0	11	0	11	0	11	0	11
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	3	1	5	1	8	1	8	0	9	0	9	0	9	0	9	0	9
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	2	0	9	1	10	0	11	0	11	0	11	0	11	0	11	0	11
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	4	2	5	1	10	0	11	0	11	0	11	0	11	0	11	0	11
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	9	2	5	3	13	0	16	0	16	0	16	0	16	0	16	0	16
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	1	1	6	1	7	0	8	0	8	0	8	0	8	0	8	0	8
06/29/76	IN	01:43	2	X	166.	2.3	24.9	0	3	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	17:50	3	X	178.	1.5	25.2	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	2	0	1	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	3	0	4	2	5	0	7	0	7	0	7	0	7	0	7	0	7
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:16	4	X	154.	1.6	25.0	1	1	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	1	8	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	1	1	4	1	5	0	6	0	6	0	6	0	6	0	6	0	6
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	3	2	7	2	10	0	12	0	12	0	12	0	12	0	12	0	12
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	5	0	2	1	6	1	6	0	7	0	7	0	7	0	7	0	7
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	1	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	2	4	4	0	10	0	10	0	10	0	10	0	10	0	10	0	10
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	3	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/30/76	IN	17:35	3	X	177.	1.9	25.4	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	DI	21:26	3	X	-9999.	1.5	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	22:08	3	X	184.	1.6	24.1	3	1	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/30/76	DI	22:08	3	X	-9999.	1.6	35.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/30/76	IN	23:02	3	X	-9999.	1.8	25.0	2	1	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/30/76	DI	23:02	3	X	-9999.	1.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:42	3	X	-9999.	2.0	25.0	2	0	3	1	4	1	4	0	5	0	5	0	5	0	5	0	5
06/30/76	DI	23:42	3	X	-9999.	2.0	35.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/76	IN	00:30	3	X	-9999.	2.2	26.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	DI	00:30	3	X	-9999.	2.2	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	01:11	3	X	-9999.	2.3	25.0	1	2	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	DI	01:11	3	X	-9999.	2.3	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	01:57	3	X	184.	2.4	25.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/76	DI	01:57	3	X	-9999.	2.4	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:23	4	X	200.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:23	4	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:06	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:06	4	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:51	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:51	4	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:39	4	X	-9999.	1.7	25.0	2	1	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/01/76	DI	19:39	4	X	-9999.	1.7	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	20:18	4	X	-9999.	1.6	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	20:18	4	X	-9999.	1.6	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	21:03	4	X	-9999.	1.5	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	21:03	4	X	-9999.	1.5	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	21:44	4	X	-9999.	1.5	25.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/76	DI	21:44	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	22:40	4	X	-9999.	1.5	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	22:40	4	X	-9999.	1.5	34.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/01/76	IN	23:20	4	X	191.	1.6	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:20	3	X	-9999.	1.6	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/76	IN	00:10	4	X	-9999.	1.8	25.0	1	1	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	1	1	5	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	02:10	4	X	169.	2.2	25.3	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/76	DI	01:50	4	X	-9999.	2.2	29.5	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/06/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:30	3	X	-9999.	2.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:10	3	X	-9999.	2.3	27.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/06/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:52	3	X	-9999.	2.3	27.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	21:45	3	X	-9999.	2.2	27.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	22:35	3	X	-9999.	2.0	26.5	3	1	4	1	7	1	7	0	8	0	8	0	8	0	8	0	8
07/06/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:32	3	X	209.	1.8	26.4	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/06/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	IN	01:58	3	X	207.	1.4	26.2	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/07/76	DI	01:58	3	X	-9999.	1.4	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/76	DI	19:50	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:02	3	X	-9999.	2.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:02	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:55	3	X	-9999.	2.4	26.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	21:55	3	X	-9999.	2.4	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	22:45	3	X	-9999.	2.3	26.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/76	DI	22:45	3	X	-9999.	2.3	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	23:36	3	X	203.	2.1	26.5	2	2	5	2	7	0	9	0	9	0	9	0	9	0	9	0	9
07/07/76	DI	23:36	3	X	-9999.	2.1	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/08/76	IN	00:29	3	X	-9999.	1.9	26.0	1	1	3	1	4	0	5	0	5	0	5	0	5	0	5	0	5
07/08/76	DI	00:29	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	01:09	3	X	-9999.	1.8	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	01:09	3	X	-9999.	1.8	29.0	0	2	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/08/76	IN	01:57	3	X	202.	1.6	25.1	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	01:57	3	X	-9999.	1.6	29.0	1	2	3	1	5	1	5	0	6	0	6	0	6	0	6	0	6
07/08/76	IN	17:31	3	X	200.	1.3	24.9	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	17:31	3	X	-9999.	1.3	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	18:25	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:25	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:06	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:48	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:48	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:28	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:28	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:12	3	X	203.	2.2	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:12	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:57	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:57	3	X	-9999.	2.3	31.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	22:40	3	X	-9999.	2.3	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	22:40	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:23	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	DI	23:23	3	X	-9999.	2.3	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	IN	00:00	3	X	-9999.	2.2	26.0	2	0	4	2	4	0	6	0	6	0	6	0	6	0	6	0	6
07/09/76	DI	00:00	3	X	-9999.	2.2	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	IN	00:47	3	X	-9999.	2.0	26.0	1	2	6	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/09/76	DI	00:47	3	X	-9999.	2.0	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/09/76	IN	01:29	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	01:29	3	X	-9999.	1.9	33.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/09/76	IN	02:07	2	X	205.	1.8	25.2	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/09/76	DI	02:07	2	X	-9999.	1.8	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	17:34	3	X	204.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:34	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:15	3	X	-9999.	1.3	26.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	DI	18:15	3	X	-9999.	1.3	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:56	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:56	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:34	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:34	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:10	3	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:10	3	X	-9999.	1.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:49	3	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:49	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:31	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:31	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:12	3	X	191.	1.7	24.4	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	DI	22:12	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:49	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:49	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:31	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:31	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:12	3	X	-9999.	2.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:12	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:54	3	X	-9999.	2.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	DI	00:54	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	01:30	3	X	-9999.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	01:30	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	02:10	3	X	198.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	02:10	3	X	-9999.	2.3	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:36	3	X	190.	1.6	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:36	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:12	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:12	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:52	3	X	-9999.	1.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:52	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:30	3	X	-9999.	1.3	25.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	19:30	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:05	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:05	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:45	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:45	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:21	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:21	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:00	3	X	184.	1.4	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:00	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:42	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:42	3	X	-9999.	1.7	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:19	3	X	-9999.	1.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	23:19	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:56	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:56	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:34	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:34	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:11	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	01:11	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:48	3	X	187.	2.3	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/14/76	DI	01:48	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:33	3	X	187.	1.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:33	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:09	3	X	-9999.	1.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:09	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:49	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:49	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:28	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:28	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:06	3	X	-9999.	1.4	25.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	DI	20:06	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:42	3	X	-9999.	1.3	25.0	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	DI	20:42	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	21:26	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:26	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:00	3	X	179.	1.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:00	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:39	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:39	3	X	-9999.	1.4	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	23:16	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:16	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:57	3	X	-9999.	1.8	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	23:57	3	X	-9999.	1.8	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	00:34	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:34	3	X	-9999.	1.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	01:15	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:15	3	X	-9999.	2.0	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	01:53	3	X	183.	2.1	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	01:53	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:59	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:38	3	X	189.	1.7	25.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:35	3	X	-9999.	1.4	26.0	2	1	1	1	3	0	4	0	4	0	4	0	4	0	4	0	4
07/15/76	DI	20:35	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:13	3	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:13	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	181.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23.46	3	X	-9999.	1.5	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	23.46	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:40	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/16/76	IN	01:55	3	X	181.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:55	3	X	-9999.	2.0	31.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/19/76	DI	20:01	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:40	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	20:40	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	21:23	3	X	177.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	21:23	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:00	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:00	3	X	-9999.	1.7	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	IN	22:38	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:38	3	X	-9999.	1.6	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:18	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:18	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:57	3	X	-9999.	1.4	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	23:57	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	00:35	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	00:35	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:10	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	01:10	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:54	3	X	175.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	01:54	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	17:32	3	X	183.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	17:32	3	X	-9999.	1.8	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:10	3	X	-9999.	1.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	18:10	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:45	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:45	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	19:25	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	19:25	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:04	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:04	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:43	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:43	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:20	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

							NUMBER OF INDIVIDUALS													
							INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/20/76	DI	21:20	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:59	3	X	185.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	21:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	22:51	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	22:51	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	23:33	3	X	-9999.	1.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	23:33	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:15	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	00:15	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:53	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	00:53	3	X	-9999.	1.5	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	01:33	3	X	-9999.	1.4	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	DI	01:33	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	02:11	3	X	191.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	02:11	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	17:29	3	X	177.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	17:29	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:06	3	X	-9999.	1.8	25.5	1	0	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/21/76	DI	18:06	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:52	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:52	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	19:30	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	19:30	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:06	3	X	-9999.	2.0	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	DI	20:06	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:44	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:44	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	21:23	3	X	183.	2.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	21:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:04	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	22:04	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:43	3	X	-9999.	1.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/21/76	DI	22:43	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	23:25	3	X	-9999.	1.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	23:25	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	23:55	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	23:53	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:34	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	00:34	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	01:10	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	01:50	3	X	198.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	01:50	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	17:24	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	17:24	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:01	3	X	179.	1.7	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	18:01	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:46	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:46	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:22	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:22	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:59	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:59	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:38	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	20:38	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:16	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:16	3	X	-9999.	2.2	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	IN	21:55	3	X	187.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:55	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:31	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	22:31	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:07	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	23:07	3	X	-9999.	2.1	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	23:47	3	X	-9999.	2.0	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:53	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	178.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	DI	01:25	3	X	-9999.	2.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	02:05	3	X	177.	2.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	02:05	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:38	4	X	178.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:38	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:16	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:16	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:54	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:54	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:37	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:37	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:13	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:13	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:53	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:53	4	X	-9999.	1.5	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:33	4	X	-9999.	1.8	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	21:33	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:13	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:13	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:53	4	X	173.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:53	4	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	23:25	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:25	4	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:05	4	X	-9999.	2.3	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	00:05	4	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:45	4	X	-9999.	2.3	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	00:45	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	01:25	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	01:25	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	02:01	4	X	176.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	02:01	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:32	4	X	177.	1.5	26.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/22/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:42	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:22	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	20:22	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:04	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:04	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:45	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:45	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:30	3	X	176.	2.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:30	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:09	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:09	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:50	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:50	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:29	3	X	-9999.	1.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:29	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:09	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:09	3	X	-9999.	1.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	02:04	3	X	187.	1.5	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	02:04	3	X	-9999.	1.5	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:50	3	X	182.	1.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:50	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:03	3	X	-9999.	1.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:03	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:20	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:20	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:02	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:03	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/25/76	IN	00:01	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:42	3	X	-9999.	2.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	DI	00:42	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:59	3	X	153.	1.7	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:39	2	X	172.	1.4	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:06	2	X	168.	1.8	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:43	2	X	166.	2.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	17:50	3	X	178.	1.5	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:16	4	X	194.	1.6	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	DI	21:26	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:08	3	X	184.	1.6	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:08	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:02	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:02	3	X	-9999.	1.8	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:42	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:42	3	X	-9999.	2.0	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:30	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:30	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:11	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:11	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	01:57	3	X	184.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	01:57	3	X	-9999.	2.4	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:23	4	X	200.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:23	4	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:06	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:06	4	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	18:51	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:51	4	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:39	4	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:39	4	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:18	4	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:18	4	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:03	4	X	-9999.	1.5	26.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	DI	21:03	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:44	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:44	4	X	-9999.	1.5	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	22:40	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:40	4	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:20	4	X	191.	1.6	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:20	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	00:10	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/76	IN	02:10	4	X	189.	2.2	23.3	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	DI	01:30	4	X	-9999.	2.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	18:30	3	X	-9999.	2.0	27.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	20:10	3	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	20:52	3	X	-9999.	2.3	27.5	5	0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/02/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	21:45	3	X	-9999.	2.2	27.0	4	2	8	1	13	0	14	0	14	0	14	0	14	0	14	0	14
07/02/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	IN	22:35	3	X	-9999.	2.0	26.5	5	1	3	1	8	1	8	0	9	0	9	0	9	0	9	0	9
07/02/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	IN	23:32	3	X	209.	1.8	26.4	10	2	5	4	13	0	17	0	17	0	17	0	17	0	17	0	17
07/02/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	5	1	3	1	8	1	8	0	9	0	9	0	9	0	9	0	9
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	5	1	6	2	10	1	11	0	12	0	12	0	12	0	12	0	12
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:58	3	X	207.	1.4	26.2	5	0	2	2	5	0	7	0	7	0	7	0	7	0	7	0	7
07/07/76	DI	01:33	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/07/76	DI	19:50	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:02	3	X	-9999.	2.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:02	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:55	3	X	-9999.	2.4	26.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	21:55	3	X	-9999.	2.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	3	X	-9999.	2.3	26.5	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	DI	22:45	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	23:36	3	X	203.	2.1	26.5	3	2	2	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/07/76	DI	23:36	3	X	-9999.	2.1	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:29	3	X	-9999.	1.9	26.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	00:29	3	X	-9999.	1.9	32.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	01:09	3	X	-9999.	1.8	26.0	4	0	3	2	5	2	5	0	7	0	7	0	7	0	7	0	7
07/08/76	DI	01:09	3	X	-9999.	1.8	29.0	0	1	3	1	3	0	4	0	4	0	4	0	4	0	4	0	4
07/08/76	IN	01:57	3	X	202.	1.6	25.1	4	0	4	3	5	3	5	3	5	3	5	0	8	0	8	0	8
07/08/76	DI	01:57	3	X	-9999.	1.6	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:31	3	X	200.	1.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:31	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:25	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:25	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:06	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:48	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:48	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:28	3	X	-9999.	2.1	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	20:28	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:12	3	X	203.	2.2	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:12	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:57	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:57	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:40	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:40	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:23	3	X	-9999.	2.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	DI	23:23	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:00	3	X	-9999.	2.2	26.0	3	4	2	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/09/76	DI	00:00	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:47	3	X	-9999.	2.0	26.0	3	0	2	4	6	3	7	1	9	1	9	1	9	1	9	1	9
07/09/76	DI	00:47	3	X	-9999.	2.0	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/09/76	IN	01:29	3	X	-9999.	1.9	26.0	4	1	4	1	8	1	8	1	8	0	9	0	9	0	9	0	9
07/09/76	DI	01:29	3	X	-9999.	1.9	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/10/76	IN	02:07	2	X	205.	1.8	25.2	2	0	1	1	2	1	2	0	3	0	3	0	3	0	3	0	3
07/10/76	DI	02:07	2	X	-9999.	1.8	30.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/12/76	IN	17:34	3	X	204.	1.4	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:34	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:15	3	X	-9999.	1.3	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:15	3	X	-9999.	1.3	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	18:56	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:56	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:34	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:34	3	X	-9999.	1.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:10	3	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:10	3	X	-9999.	1.2	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:49	3	X	-9999.	1.3	25.5	3	0	2	1	4	1	4	0	5	0	5	0	5	0	5	0	5
07/12/76	DI	20:49	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:31	3	X	-9999.	1.5	25.5	2	1	3	1	5	1	5	1	5	1	5	0	6	0	6	0	6
07/12/76	DI	21:31	3	X	-9999.	1.5	35.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/12/76	IN	22:12	3	X	191.	1.7	24.4	8	0	3	2	9	1	10	1	10	1	10	0	11	0	11	0	11
07/12/76	DI	22:12	3	X	-9999.	1.7	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/12/76	IN	22:49	3	X	-9999.	1.9	25.0	2	0	0	1	1	1	1	1	1	0	2	0	2	0	2	0	2
07/12/76	DI	22:49	3	X	-9999.	1.9	32.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	23:31	3	X	-9999.	2.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:31	3	X	-9999.	2.0	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:12	3	X	-9999.	2.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:12	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:54	3	X	-9999.	2.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	DI	00:54	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	01:30	3	X	-9999.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	01:30	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	02:10	3	X	198.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	02:10	3	X	-9999.	2.3	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:36	3	X	190.	1.6	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:36	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:12	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:12	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:52	3	X	-9999.	1.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:52	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:30	3	X	-9999.	1.3	25.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	19:30	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:05	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:05	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:45	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:45	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:21	3	X	-9999.	1.2	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/13/76	DI	21:21	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:00	3	X	184.	1.4	24.2	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/13/76	DI	22:00	3	X	-9999.	1.4	33.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/13/76	IN	22:42	3	X	-9999.	1.7	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/13/76	DI	22:42	3	X	-9999.	1.7	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:19	3	X	-9999.	1.9	25.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/13/76	DI	23:19	3	X	-9999.	1.9	32.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/13/76	IN	23:56	3	X	-9999.	2.0	25.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/13/76	DI	23:56	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:34	3	X	-9999.	2.1	25.0	2	1	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/14/76	DI	00:34	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:11	3	X	-9999.	2.2	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	01:11	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:48	3	X	187.	2.3	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/14/76	DI	01:48	3	X	-9999.	2.3	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	17:33	3	X	187.	1.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:33	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:09	3	X	-9999.	1.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:09	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:49	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:49	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:28	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:28	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:06	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:06	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:42	3	X	-9999.	1.3	25.0	2	1	2	1	4	0	5	0	5	0	5	0	5	0	5	0	5
07/14/76	DI	20:42	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:26	3	X	-9999.	1.3	25.0	1	0	1	1	1	1	1	1	1	1	1	0	2	0	2	0	2
07/14/76	DI	21:26	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:00	3	X	179.	1.3	24.2	3	1	1	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/14/76	DI	22:00	3	X	-9999.	1.3	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:39	3	X	-9999.	1.4	25.0	1	2	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/14/76	DI	22:39	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:16	3	X	-9999.	1.5	25.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/14/76	DI	23:16	3	X	-9999.	1.5	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	IN	23:57	3	X	-9999.	1.8	25.0	5	0	5	1	9	1	9	1	9	0	10	0	10	0	10	0	10
07/14/76	DI	23:57	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:34	3	X	-9999.	1.9	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	00:34	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	01:15	3	X	-9999.	2.0	25.0	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	DI	01:15	3	X	-9999.	2.0	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	01:53	3	X	183.	2.1	24.3	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/15/76	DI	01:53	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:59	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:38	3	X	189.	1.7	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:38	3	X	-9999.	1.4	26.0	1	2	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/15/76	DI	20:38	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:18	3	X	-9999.	1.3	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	21:18	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	134.	1.3	25.0	1	0	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	IN	23:46	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:46	3	X	-9999.	1.5	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	4	0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4
07/16/76	DI	00:40	3	X	-9999.	1.6	31.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	3	0	2	1	4	0	5	0	5	0	5	0	5	0	5	0	5
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/16/76	IN	01:55	3	X	181.	2.0	25.0	3	0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/16/76	DI	01:55	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/19/76	DI	20:01	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:40	3	X	-9999.	1.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	20:40	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	21:23	3	X	177.	1.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	21:23	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:00	3	X	-9999.	1.7	25.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	22:00	3	X	-9999.	1.7	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	IN	22:38	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:38	3	X	-9999.	1.6	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:18	3	X	-9999.	1.5	25.0	2	1	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/19/76	DI	23:18	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:57	3	X	-9999.	1.4	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	23:57	3	X	-9999.	1.4	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	IN	00:35	3	X	-9999.	1.3	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	00:35	3	X	-9999.	1.3	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	IN	01:10	3	X	-9999.	1.3	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	01:10	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:54	3	X	175.	1.3	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	01:54	3	X	-9999.	1.3	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	IN	17:32	3	X	183.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	17:32	3	X	-9999.	1.8	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:10	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:10	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:45	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:45	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	19:25	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	19:25	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:04	3	X	-9999.	2.0	26.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	20:04	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:43	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:43	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:20	3	X	-9999.	2.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/20/76	DI	21:20	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:59	3	X	185.	1.9	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/20/76	DI	21:59	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	22:51	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	22:51	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	23:33	3	X	-9999.	1.6	26.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/20/76	DI	23:33	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:15	3	X	-9999.	1.6	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	DI	00:15	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:53	3	X	-9999.	1.5	25.0	3	2	1	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/21/76	DI	00:53	3	X	-9999.	1.5	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	IN	01:33	3	X	-9999.	1.4	25.0	2	0	1	1	2	1	2	0	3	0	3	0	3	0	3	0	3
07/21/76	DI	01:33	3	X	-9999.	1.4	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	02:11	3	X	191.	1.4	25.4	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	DI	02:11	3	X	-9999.	1.4	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/21/76	IN	17:29	3	X	177.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	17:29	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:06	3	X	-9999.	1.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:06	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	18:52	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	18:52	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	19:30	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	19:30	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:06	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:06	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	20:44	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	20:44	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	21:23	3	X	183.	2.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	DI	21:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:04	3	X	-9999.	2.0	25.5	2	0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/21/76	DI	22:04	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	22:43	3	X	-9999.	1.9	25.5	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/21/76	DI	22:43	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	23:25	3	X	-9999.	1.7	26.0	3	0	0	1	2	1	2	0	3	0	3	0	3	0	3	0	3
07/21/76	DI	23:25	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	23:55	3	X	-9999.	1.7	25.0	4	0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/21/76	DI	23:53	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/21/76	IN	00:34	3	X	-9999.	1.5	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	00:34	3	X	-9999.	1.5	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	IN	01:10	3	X	-9999.	1.5	25.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/22/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/22/76	IN	01:50	3	X	198.	1.4	25.0	2	1	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/22/76	DI	01:50	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	17:24	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	17:24	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:01	3	X	179.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:01	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:46	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:46	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:22	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:22	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:59	3	X	-9999.	2.1	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	19:59	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:38	3	X	-9999.	2.1	26.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	20:38	3	X	-9999.	2.1	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:16	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:16	3	X	-9999.	2.2	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:55	3	X	187.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:55	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:31	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	22:31	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:07	3	X	-9999.	2.1	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	23:07	3	X	-9999.	2.1	36.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/23/76	IN	23:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/23/76	DI	01:53	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	178.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	DI	01:25	3	X	-9999.	2.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	02:05	3	X	177.	2.2	25.4	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	02:05	3	X	-9999.	2.2	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	IN	17:38	4	X	178.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:38	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:16	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:16	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:54	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:54	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:37	4	X	-9999.	1.2	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	19:37	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:13	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:13	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:53	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:53	4	X	-9999.	1.5	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:33	4	X	-9999.	1.8	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	21:33	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:13	4	X	-9999.	1.9	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	22:13	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:53	4	X	173.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:53	4	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	23:25	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:25	4	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:05	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:05	4	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:45	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:45	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	01:25	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	01:25	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	02:01	4	X	176.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	02:01	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:32	4	X	177.	1.5	26.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	DI	17:32	4	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:08	4	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:08	4	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:48	4	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:48	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:26	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:26	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:05	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:05	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:42	3	X	-9999.	1.2	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	20:42	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:22	3	X	-9999.	1.4	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	21:22	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:01	3	X	169.	1.6	25.0	3	0	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/28/76	DI	22:01	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:39	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:39	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:12	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:12	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:50	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:50	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:25	3	X	-9999.	2.2	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	DI	00:25	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:05	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:05	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:42	3	X	177.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:42	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:38	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:38	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:11	3	X	172.	1.6	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:11	3	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:51	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	DI	18:51	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:20	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:30	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:13	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:12	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:45	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	21:25	3	X	170.	1.3	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	21:20	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	22:45	3	X	-9999.	1.7	25.0	4	0	2	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/29/76	DI	22:40	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	23:25	3	X	-9999.	1.9	25.0	5	1	1	1	6	0	7	0	7	0	7	0	7	0	7	0	7
07/29/76	DI	23:25	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:15	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:15	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:54	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:54	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	01:31	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	01:31	3	X	-9999.	2.3	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	02:08	3	X	172.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	02:08	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/14/76	IN	23:47	3	X	129.	1.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:47	3	X	-9999.	1.7	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/15/76	IN	01:38	3	X	-9999.	2.1	19.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/15/76	DI	01:38	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	3	X	132.	1.7	20.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	19:14	3	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:35	3	X	-9999.	1.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:35	3	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:46	3	X	132.	1.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:46	3	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:09	3	X	-9999.	1.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:09	3	X	-9999.	1.6	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	01:18	3	X	135.	1.9	19.7	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	01:18	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:48	2	X	134.	2.0	20.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:48	2	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:12	2	X	-9999.	1.7	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:12	2	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:18	2	X	-9999.	1.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:18	2	X	-9999.	1.5	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	00:19	2	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:19	2	X	-9999.	1.4	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	01:52	2	X	149.	1.9	20.7	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/76	DI	01:52	2	X	-9999.	1.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:37	2	X	145.	1.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:37	2	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:19	2	X	-9999.	1.7	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:19	2	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:34	2	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:21	2	X	198.	1.3	21.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:21	2	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/18/76	IN	00:17	2	X	-9999.	1.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:17	2	X	-9999.	1.3	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	01:24	2	X	219.	1.5	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	01:24	2	X	-9999.	1.5	27.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/21/76	IN	17:38	3	X	156.	1.8	23.2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/21/76	DI	17:38	3	X	-9999.	1.8	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	IN	18:26	3	X	-9999.	1.9	23.0	0	2	0	1	1	1	1	1	1	1	1	1	1	0	2	0	2
06/21/76	DI	18:26	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:21	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:21	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:12	3	X	-9999.	2.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:12	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	20:51	3	X	-9999.	2.1	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/21/76	DI	20:51	3	X	-9999.	2.1	33.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	IN	21:41	3	X	146.	2.1	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	21:41	3	X	-9999.	2.1	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	IN	22:44	3	X	-9999.	1.9	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/21/76	DI	22:44	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:36	3	X	-9999.	1.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:36	3	X	-9999.	1.8	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/22/76	IN	00:24	3	X	-9999.	1.6	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/22/76	DI	00:24	3	X	-9999.	1.6	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	01:10	3	X	-9999.	1.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	01:10	3	X	-9999.	1.5	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	02:00	3	X	141.	1.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	02:00	3	X	-9999.	1.5	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	17:38	3	X	152.	1.6	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:38	3	X	-9999.	1.6	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:21	3	X	-9999.	1.8	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	18:21	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:01	3	X	-9999.	1.8	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	19:01	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/22/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:42	3	X	-9999.	1.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/22/76	IN	20:22	3	X	-9999.	2.0	24.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/22/76	DI	20:22	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:04	3	X	-9999.	2.1	24.0	2	0	0	2	0	2	0	2	0	2	0	1	1	1	1	0	2
06/22/76	DI	21:04	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:45	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:45	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:30	3	X	176.	2.0	23.6	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	22:30	3	X	-9999.	2.0	33.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/22/76	IN	23:09	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:09	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:50	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:50	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:29	3	X	-9999.	1.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:29	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:09	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:09	3	X	-9999.	1.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	02:04	3	X	187.	1.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	02:04	3	X	-9999.	1.5	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:50	3	X	152.	1.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:50	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	3	X	-9999.	1.6	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	18:28	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:03	3	X	-9999.	1.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:03	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:20	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:20	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:02	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:03	3	X	-9999.	2.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	21:48	3	X	149.	2.2	23.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:48	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	22:26	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:26	3	X	-9999.	2.2	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	23:06	3	X	-9999.	2.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	23:06	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:43	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:43	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:19	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:19	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:59	3	X	-9999.	1.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:59	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:38	3	X	148.	1.7	23.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	01:38	3	X	-9999	1.7	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	17:45	3	X	156.	1.3	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:25	3	X	-9999.	1.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:25	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:09	3	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:09	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:54	3	X	-9999.	1.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:54	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:35	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:35	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:19	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:19	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:02	3	X	155.	2.1	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:02	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:44	3	X	-9999.	2.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:44	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:22	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:22	3	X	-9999.	2.1	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/25/76	IN	00:01	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:42	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:42	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:59	3	X	153.	1.7	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:39	2	X	172.	1.4	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:06	2	X	168.	1.8	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:43	2	X	166.	2.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	17:50	3	X	178.	1.5	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:16	4	X	154.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- YS LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	02:10	4	X	189.	2.2	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:50	4	X	-9999.	2.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:30	3	X	-9999.	2.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:10	3	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:52	3	X	-9999.	2.3	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	21:45	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	22:35	3	X	-9999.	2.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:32	3	X	209.	1.8	26.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:58	3	X	207.	1.4	26.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:58	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CYPRINIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/19/76	DI	20:01	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:40	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	20:40	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	21:23	3	X	177.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	21:23	3	X	-9999.	1.8	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:00	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:00	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	22:38	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	22:38	3	X	-9999.	1.6	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:18	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:18	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	23:57	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	23:57	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	00:35	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	00:35	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:10	3	X	-9999.	1.3	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/20/76	DI	01:10	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	01:54	3	X	175.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	01:54	3	X	-9999.	1.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	17:32	3	X	183.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	17:32	3	X	-9999.	1.8	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:10	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:10	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	18:45	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	18:45	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	19:25	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	19:25	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:04	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:04	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	20:43	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	DI	20:43	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/20/76	IN	21:20	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-TESSELLATED DARTER-LARVA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/22/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:42	3	X	-9999.	1.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:22	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	20:22	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:04	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:04	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:45	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:45	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:30	3	X	176.	2.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:30	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:09	3	X	-9999.	2.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:09	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:50	3	X	-9999.	1.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:50	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:29	3	X	-9999.	1.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:29	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:09	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:09	3	X	-9999.	1.6	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	02:04	3	X	187.	1.5	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	02:04	3	X	-9999.	1.5	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:50	3	X	152.	1.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:50	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	3	X	-9999.	1.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:03	3	X	-9999.	1.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:03	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	3	X	-9999.	1.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	20:20	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:20	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:02	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:03	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-TESSELLATED DARTER-LARVA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	00:01	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:01	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:42	3	X	-9999.	2.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:42	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:20	3	X	-9999.	1.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:20	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:59	3	X	153.	1.7	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:59	3	X	-9999.	1.7	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/28/76	IN	17:39	2	X	172.	1.4	25.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:39	2	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:20	2	X	-9999.	1.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:20	2	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:03	2	X	-9999.	1.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:03	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:45	2	X	-9999.	1.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:45	2	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:20	2	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:30	2	X	-9999.	1.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:30	2	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:06	2	X	168.	1.8	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:06	2	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:51	2	X	-9999.	2.0	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:51	2	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:38	2	X	-9999.	2.1	24.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:38	2	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:19	2	X	-9999.	2.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	00:19	2	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:04	2	X	-9999.	2.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:04	2	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	01:43	2	X	166.	2.3	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:43	2	X	-9999.	2.3	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	17:50	3	X	178.	1.5	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-TESSELLATED DARTER-YS LA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/14/76	IN	23:47	3	X	129.	1.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:47	3	X	-9999.	1.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	01:38	3	X	-9999.	2.1	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:38	3	X	-9999.	2.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	3	X	132.	1.7	20.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	3	X	-9999.	1.7	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	19:14	3	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:35	3	X	-9999.	1.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:35	3	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:46	3	X	132.	1.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:46	3	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:09	3	X	-9999.	1.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:09	3	X	-9999.	1.6	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	01:18	3	X	135.	1.9	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	01:18	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:43	2	X	134.	2.0	20.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:43	2	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:12	2	X	-9999.	1.7	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:12	2	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:18	2	X	-9999.	1.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:18	2	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	00:19	2	X	-9999.	1.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:19	2	X	-9999.	1.4	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	01:52	2	X	149.	1.9	20.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	01:52	2	X	-9999.	1.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:37	2	X	145.	1.9	21.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:37	2	X	-9999.	1.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	19:19	2	X	-9999.	1.7	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:19	2	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:34	2	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:21	2	X	198.	1.3	21.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:21	2	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-TESSELLATED DARTER-JUV/A

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	DI	17:50	3	X	-9999.	1.5	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:55	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:55	3	X	-9999.	1.4	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:36	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:36	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:23	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:23	4	X	-9999.	1.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:03	4	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:03	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:16	4	X	194.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:16	4	X	-9999.	1.6	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:56	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:56	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:45	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:44	4	X	-9999.	2.1	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:26	4	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:26	4	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	01:08	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:08	4	X	-9999.	2.3	30.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	IN	01:47	4	X	211.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:47	4	X	-9999.	2.3	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:35	3	X	177.	1.9	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:35	3	X	-9999.	1.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:26	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:26	3	X	-9999.	1.7	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:05	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:05	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	19:52	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	19:52	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:37	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:37	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:26	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	DI	18:38	3	X	-9999.	1.7	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:19	3	X	-9999.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:19	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	3	X	-9999.	1.5	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:35	3	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:35	3	X	-9999.	1.4	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:13	3	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:13	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:53	3	X	181.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:53	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:32	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:32	3	X	-9999.	1.3	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:10	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:10	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:46	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:46	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:40	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:40	3	X	-9999.	1.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:20	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:20	3	X	-9999.	1.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	01:55	3	X	181.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	01:55	3	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	17:30	3	X	177.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	17:30	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:08	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:08	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	18:47	3	X	-9999.	2.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	DI	18:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	19:23	3	X	-9999.	2.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/19/76	DI	19:23	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/19/76	IN	20:01	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:53	3	X	-9999	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	178.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	DI	01:25	3	X	-9999.	2.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	02:05	3	X	177.	2.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	02:05	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:38	4	X	178.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:38	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:16	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:16	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:54	4	X	-9999.	1.2	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	18:54	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:37	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:37	4	X	-9999.	1.2	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	IN	20:13	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:13	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:53	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:53	4	X	-9999.	1.5	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:33	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	21:33	4	X	-9999.	1.8	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	IN	22:13	4	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:13	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:53	4	X	173.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:53	4	X	-9999.	2.0	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	IN	23:25	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:25	4	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:05	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:05	4	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:45	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:45	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	01:25	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	01:25	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	02:01	4	X	176.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	02:01	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:32	4	X	177.	1.5	26.3	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	17:32	4	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:08	4	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:08	4	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	18:48	4	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	18:48	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	19:26	4	X	-9999.	1.2	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	19:26	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:05	4	X	-9999.	1.2	25.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/22/76	DI	20:05	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	20:42	3	X	-9999.	1.2	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/22/76	DI	20:42	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	21:22	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	21:22	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:01	3	X	169.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	22:01	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	22:39	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	22:39	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:12	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	23:12	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	IN	23:50	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/22/76	DI	23:50	3	X	-9999.	2.1	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/23/76	IN	00:25	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	00:25	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:05	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:05	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:42	3	X	177.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:42	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	17:38	3	X	-9999.	1.7	25.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/23/76	DI	17:38	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	18:11	3	X	172.	1.6	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	18:11	3	X	-9999.	1.6	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/23/76	IN	18:51	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	DI	18:51	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:30	3	X	-9999.	1.4	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	DI	19:30	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:13	3	X	-9999.	1.3	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	DI	20:12	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:45	3	X	-9999.	1.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:45	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	21:25	3	X	170.	1.3	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	21:25	3	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	22:45	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:45	3	X	-9999.	1.7	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	IN	23:25	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:25	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:15	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:15	3	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:54	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:54	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	01:31	3	X	-9999.	2.3	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/30/76	DI	01:31	3	X	-9999.	2.3	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	02:08	3	X	172.	2.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	02:08	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	DI	00:10	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	01:00	4	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:00	4	X	-9999.	2.0	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	02:10	4	X	189.	2.2	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:50	4	X	-9999.	2.2	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:30	3	X	219.	1.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:30	3	X	-9999.	1.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:30	3	X	-9999.	2.0	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:30	3	X	-9999.	2.0	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:23	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:23	3	X	-9999.	2.2	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:10	3	X	-9999.	2.3	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:10	3	X	-9999.	2.3	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:52	3	X	-9999.	2.3	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:52	3	X	-9999.	2.3	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	21:45	3	X	-9999.	2.2	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:45	3	X	-9999.	2.2	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	22:35	3	X	-9999.	2.0	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:35	3	X	-9999.	2.0	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:32	3	X	209.	1.8	26.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:32	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:17	3	X	-9999.	1.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:17	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:10	3	X	-9999.	1.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	01:10	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	01:58	3	X	207.	1.4	26.2	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	01:58	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:30	3	X	201.	1.7	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:30	3	X	-9999.	1.7	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:08	3	X	-9999.	2.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:08	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:50	3	X	-9999.	2.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	DI	00:54	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	01:30	3	X	-9999.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	01:30	3	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	02:10	3	X	198.	2.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	02:10	3	X	-9999.	2.3	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:36	3	X	190.	1.6	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:36	3	X	-9999.	1.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:12	3	X	-9999.	1.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:12	3	X	-9999.	1.5	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:52	3	X	-9999.	1.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:52	3	X	-9999.	1.4	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:30	3	X	-9999.	1.3	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	19:30	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:05	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:05	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:45	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:45	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:21	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:21	3	X	-9999.	1.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:00	3	X	184.	1.4	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:00	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:42	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:42	3	X	-9999.	1.7	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:19	3	X	-9999.	1.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:19	3	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:56	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:56	3	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:34	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:34	3	X	-9999.	2.1	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:11	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	01:11	3	X	-9999.	2.2	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	01:48	3	X	187.	2.3	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/22/76	DI	23:47	3	X	-9999.	2.0	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	00:33	3	X	-9999.	1.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	00:33	3	X	-9999.	1.9	36.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:11	3	X	-9999.	1.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:11	3	X	-9999.	1.8	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	IN	01:53	3	X	182.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/23/76	DI	01:53	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:32	3	X	178.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:32	3	X	-9999.	1.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:13	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:13	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:52	3	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:52	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:30	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:30	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:11	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:11	3	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:51	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:51	3	X	-9999.	1.7	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:27	3	X	174.	1.9	25.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:27	3	X	-9999.	1.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:07	3	X	-9999.	2.0	25.0	0	2	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/26/76	DI	22:07	3	X	-9999.	2.0	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:45	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:45	3	X	-9999.	2.2	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:25	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:25	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:05	3	X	-9999.	2.4	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	00:05	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:45	3	X	-9999.	2.4	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	00:45	3	X	-9999.	2.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:25	3	X	-9999.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	DI	01:25	3	X	-9999.	2.3	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	02:05	3	X	177.	2.2	25.4	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/27/76	DI	02:05	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:38	4	X	178.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:38	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:16	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:16	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:54	4	X	-9999.	1.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:54	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:37	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:37	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:13	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:13	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:53	4	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:53	4	X	-9999.	1.5	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:33	4	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	21:33	4	X	-9999.	1.8	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:13	4	X	-9999.	1.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/27/76	DI	22:13	4	X	-9999.	1.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:53	4	X	173.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:53	4	X	-9999.	2.0	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	23:25	4	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:25	4	X	-9999.	2.1	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:05	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:05	4	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:45	4	X	-9999.	2.3	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	00:45	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	01:25	4	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	01:25	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	02:01	4	X	176.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	02:01	4	X	-9999.	2.3	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:32	4	X	177.	1.5	26.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	DI	17:32	4	X	-9999.	1.5	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:08	4	X	-9999.	1.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:08	4	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:48	4	X	-9999.	1.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:48	4	X	-9999.	1.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:26	4	X	-9999.	1.2	26.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	19:26	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:05	4	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:05	4	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:42	3	X	-9999.	1.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:42	3	X	-9999.	1.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:22	3	X	-9999.	1.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:22	3	X	-9999.	1.4	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:01	3	X	169.	1.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:01	3	X	-9999.	1.6	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:39	3	X	-9999.	1.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:39	3	X	-9999.	1.8	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:12	3	X	-9999.	2.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:12	3	X	-9999.	2.0	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:50	3	X	-9999.	2.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:50	3	X	-9999.	2.1	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:25	3	X	-9999.	2.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:25	3	X	-9999.	2.2	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:05	3	X	-9999.	2.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:05	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	01:42	3	X	177.	2.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	01:42	3	X	-9999.	2.3	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:38	3	X	-9999.	1.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:38	3	X	-9999.	1.7	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:11	3	X	172.	1.6	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:11	3	X	-9999.	1.6	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	18:51	3	X	-9999.	1.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

1.2 BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	17:15	4	X	160.	0.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:15	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:10	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:10	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:59	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:59	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:49	4	X	160.	0.9	19.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:49	0	X	-9999.	-9.9	27.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:39	4	X	140.	1.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:39	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:27	4	X	-9999.	1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:27	0	X	-9999.	-9.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:04	4	X	160.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:04	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	23:49	4	X	-9999.	0.7	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:49	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	00:43	4	X	160.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	00:43	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:08	4	X	165.	-0.3	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:08	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:55	4	X	-9999.	0.1	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:55	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:41	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:41	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	19:20	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	19:20	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:06	4	X	165.	0.8	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:06	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:54	4	X	165.	1.0	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:54	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	22:30	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	22:30	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/76	IN	23:12	4	X	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	24:00	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	24:00	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:50	4	X	160.	0.4	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:50	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:00	4	X	210.	0.0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:00	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:55	4	X	-9999.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:55	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	18:40	4	X	-9999.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	18:40	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	19:29	4	X	-9999.	-0.4	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	19:29	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	20:17	4	X	-9999.	-0.4	19.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	DI	20:17	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	21:09	4	X	210.	0.0	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	21:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	22:43	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:43	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	23:30	4	X	-9999.	0.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:30	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	00:14	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	00:14	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	01:01	4	X	190.	0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:01	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	16:58	4	X	200.	0.1	19.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	16:58	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	18:37	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	18:37	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/15/76	IN	19:26	4	X	-9999.	-0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	19:26	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	20:16	4	X	-9999.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	20:16	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:38	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:38	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:27	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:27	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	23:13	4	X	190.	0.4	20.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	23:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:02	4	X	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:02	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:47	4	X	180.	0.7	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:47	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	16:24	4	X	190.	0.6	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	16:24	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:11	4	X	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:03	4	X	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:03	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:02	4	X	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:02	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:50	4	X	-9999.	-0.1	20.0	2	0	1	2	1	1	2	0	3	0	3	0	3	0	3	0	3
06/16/76	DI	19:50	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:42	4	X	190.	-0.3	20.1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	20:42	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	21:29	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:29	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:05	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:05	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:53	4	X	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:53	0	X	-9999.	-9.9	21.0	1	0	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	16:33	4	X	180.	0.6	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:33	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:19	4	X	-9999.	0.5	21.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/17/76	DI	17:19	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:05	4	X	-9999.	0.2	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	18:05	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:49	4	X	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:35	4	X	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:35	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	20:23	4	X	-9999.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:23	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:08	4	X	175.	-0.2	20.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:08	0	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	22:38	4	X	-9999.	-0.3	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:38	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:23	4	X	-9999.	-0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:23	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	00:10	4	X	-9999.	0.1	20.5	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/18/76	DI	00:10	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	00:55	4	X	170.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:55	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	16:40	4	X	140.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	17:27	4	X	151.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	17:27	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	18:15	4	X	150.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	18:15	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:03	4	X	150.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:03	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:48	4	X	150.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:48	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/21/76	IN	20:30	4	X	150.	0.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:30	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:17	4	X	160.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	21:17	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:11	4	X	170.	0.3	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:11	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:56	4	X	250.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:56	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/22/76	IN	00:41	4	X	350.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	00:41	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	16:37	4	X	-9999.	0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	16:37	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/22/76	IN	17:25	4	X	240.	0.5	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:10	4	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:10	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:57	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:57	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:44	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:44	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:36	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	20:36	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:23	2	X	260.	0.6	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:23	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:59	2	X	-9999.	0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:46	2	X	-9999.	0.2	22.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/22/76	DI	23:46	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:37	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:19	2	X	260.	-0.1	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:19	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	16:12	2	X	-9999.	0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:12	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	16:59	2	X	450.	0.2	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:45	2	X	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	2	X	-9999.	0.6	23.0	0	0	0	0	0	0	0	0	0.	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:15	2	X	400.	0.8	22.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	19:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:01	4	X	-9999.	0.8	23.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	20:01	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:45	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:28	4	X	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:28	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:02	4	X	420.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:02	0	X	-9999.	-9.9	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	IN	23:48	4	X	460.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:48	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:31	4	X	600.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:09	4	X	750.	0.0	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	01:09	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	16:20	4	X	770.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:20	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:07	0	X	815.	0.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:52	4	X	-9999.	0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:52	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:38	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:38	0	X	-9999.	-9.9	33.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/76	IN	19:30	4	X	-9999.	0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:18	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:18	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:04	4	X	790.	0.8	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:04	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:55	4	X	-9999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:55	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:30	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:17	4	X	-9999.	0.3	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	DI	00:17	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:00	4	X	960.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:00	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	16:30	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	16:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:24	4	X	2210.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:13	4	X	-9999.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:02	4	X	-9999.	-0.1	24.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	19:02	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:55	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:55	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:46	4	X	-9999.	0.4	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:52	4	X	2170.	0.9	24.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/28/76	DI	22:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:42	4	X	-9999.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:42	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	00:30	4	X	-9999.	0.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	00:30	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	IN	01:11	4	X	2080.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	01:11	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:55	4	X	1940.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:40	4	X	-9999.	0.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	20:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:27	4	X	1800.	0.5	24.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	21:27	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:15	4	X	-9999.	0.7	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	22:15	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:58	4	X	-9999.	0.9	24.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/29/76	DI	22:58	0	X	-9999.	-9.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	IN	23:41	4	X	-9999.	1.0	24.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	23:41	0	X	2050.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	00:28	4	X	-9999.	1.0	24.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/30/76	DI	00:28	0	X	-9999.	-9.9	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/30/76	IN	01:10	4	X	1940.	1.0	23.8	4	0	0	4	0	4	0	4	0	4	0	4	0	4	0	3	1
06/30/76	DI	01:10	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	17:13	4	X	1670.	0.2	23.8	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/30/76	DI	17:13	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:17	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:07	4	X	1500.	0.5	23.8	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/30/76	DI	22:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:54	4	X	-9999.	0.8	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	DI	22:54	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	23:40	4	X	-9999.	0.9	23.5	1	0	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/30/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:40	4	X	1570.	1.1	23.6	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	00:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:32	4	X	1360.	0.3	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:32	0	X	-9999.	-9.9	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/76	IN	18:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:17	0	X	-9999.	-9.9	25.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/01/76	IN	19:08	4	X	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:08	0	X	-9999.	-9.9	24.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/01/76	IN	19:55	4	X	-9999.	0.0	24.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	0	3
07/01/76	DI	19:55	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	20:45	4	X	1100.	0.0	24.3	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	20:45	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:33	4	X	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:33	0	X	-9999.	-9.9	24.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	23:07	4	X	-9999.	0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:07	0	X	-9999.	-9.9	24.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	IN	23:52	4	X	-9999.	0.8	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	23:52	0	X	-9999.	-9.9	24.5	1	1	0	2	0	2	0	2	0	2	0	2	0	1	1	1	1
07/02/76	IN	00:36	4	X	-9999.	0.8	24.5	2	0	0	2	0	2	0	1	1	1	1	1	1	1	1	1	1
07/02/76	DI	00:36	0	X	-9999.	-9.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	IN	01:19	4	X	990.	0.9	24.1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/02/76	DI	01:19	0	X	-9999.	-9.9	24.5	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	16:31	4	X	210.	0.6	26.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	16:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:12	4	X	-9999.	0.8	26.0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/06/76	DI	17:12	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:54	4	X	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:35	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:35	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:15	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:15	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:57	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:57	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:38	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:38	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/06/76	IN	21:19	4	X	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:19	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	22:48	4	X	-9999.	0.2	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/06/76	DI	22:48	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:31	4	X	210.	0.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:12	4	X	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:12	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:51	4	X	210.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:51	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	16:52	5	X	180.	0.5	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	16:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:32	5	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:32	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:13	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:52	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:31	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:31	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:10	5	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:10	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:49	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:49	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:29	5	X	270.	0.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:29	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	5	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	23:24	5	X	-9999.	0.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:24	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:04	5	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:04	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	IN	00:40	5	X	1040.	0.1	23.4	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:14	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:14	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:25	4	X	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	23:25	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	16:36	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:36	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:07	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- YOLK SAC LA

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/76	IN	23:12	4	X	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	24:00	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	24:00	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:50	4	X	160.	0.4	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:50	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:00	4	X	210.	0.0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:00	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:55	4	X	-9999.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:55	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	18:40	4	X	-9999.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	18:40	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	19:29	4	X	-9999.	-0.4	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	19:29	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	IN	20:17	4	X	-9999.	-0.4	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	20:17	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	21:09	4	X	210.	0.0	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	21:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	22:43	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:43	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	23:30	4	X	-9999.	0.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:30	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	00:14	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	00:14	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	01:01	4	X	190.	0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:01	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	16:58	4	X	200.	0.1	19.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	16:58	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	18:37	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	18:37	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	4	0	0	4	0	3	1	3	1	3	1	3	1	3	1	3	1
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/26/76	IN	19:57	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:57	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:38	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:20	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:20	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	22:59	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:59	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:43	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:43	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:26	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:26	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:08	4	X	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	01:08	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	16:15	4	X	6970.	-0.2	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	16:56	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:56	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:35	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:35	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:18	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:18	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:00	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:00	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:42	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:42	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:22	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:22	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:01	4	X	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	21:01	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:36	4	X	-9999.	0.9	24.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/27/76	DI	22:36	0	X	-9999.	-9.9	33.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	IN	23:17	4	X	7190.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:17	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:01	4	X	-9999.	0.9	24.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/28/76	DI	00:01	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	00:43	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:43	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	16:44	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	16:44	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:25	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	17:25	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:09	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:56	4	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:56	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:38	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:21	4	X	6880.	0.2	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:21	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:03	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:03	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:40	4	X	6890.	0.8	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:24	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:05	4	X	-9999.	1.0	25.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0
07/29/76	DI	00:05	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:44	4	X	6810.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:44	0	X	-9999.	-9.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/29/76	IN	16:34	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	16:34	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:25	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/18/76	IN	19:34	2	X	540.	-0.6	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	19:35	0	X	-9999.	-9.9	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	20:35	2	X	-9999.	-0.2	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	20:39	0	X	-9999.	-9.9	12.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	21:38	2	X	380.	0.2	3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	21:38	0	X	-9999.	-9.9	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	22:43	2	X	-9999.	0.5	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	22:43	0	X	550.	-9.9	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	23:52	2	X	-9999.	0.7	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	23:49	0	X	-9999.	-9.9	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/19/76	IN	00:58	2	X	410.	0.7	3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/19/76	DI	01:03	0	X	-9999.	-9.9	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	17:51	4	X	130.	0.2	7.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	18:00	0	X	-9999.	-9.9	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	19:14	4	X	-9999.	0.5	8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	19:15	0	X	165.	-9.9	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	20:33	4	X	-9999.	0.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	20:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	21:33	4	X	130.	1.1	7.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	21:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	22:35	4	X	-9999.	1.2	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	22:37	0	X	165.	-9.9	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	23:45	4	X	-9999.	0.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	23:55	0	X	-9999.	-9.9	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	IN	01:00	4	X	-9999.	0.7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	DI	01:00	0	X	-9999.	-9.9	13.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	IN	00:30	4	X	128.	0.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	DI	00:30	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	IN	23:15	4	X	140.	-0.3	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	DI	23:15	0	X	-9999.	-9.9	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/20/76	IN	01:11	4	X	140.	0.0	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/76	DI	01:11	0	X	-9999.	-9.9	19.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/24/76	IN	17:55	4	X	130.	0.5	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	17:55	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	IN	19:40	4	X	130.	0.8	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	19:40	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	IN	22:04	4	X	130.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	22:04	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	IN	23:57	4	X	-9999.	0.4	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	23:57	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	01:13	4	X	130.	0.2	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	01:13	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	17:15	4	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	17:15	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/25/76	IN	18:35	4	X	122.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	18:35	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	21:00	4	X	120.	1.1	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	21:00	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	22:25	4	X	120.	1.0	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	22:25	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	23:48	4	X	120.	0.6	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	23:48	0	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	17:50	4	X	160.	0.2	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	17:50	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	19:17	4	X	-9999.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	19:17	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	20:46	4	X	-9999.	0.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	20:46	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	22:13	4	X	160.	0.9	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	22:13	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	23:36	4	X	-9999.	0.7	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	23:36	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	IN	01:02	4	X	160.	0.3	16.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	DI	01:02	0	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/02/76	IN	21:05	4	X	190.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	21:05	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	22:25	4	X	-9999.	0.4	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	22:25	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	23:57	4	X	175.	0.8	17.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	23:57	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	01:15	4	X	180.	1.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	01:15	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	17:12	4	X	180.	0.5	17.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	17:12	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	18:12	4	X	-9999.	0.2	17.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	18:12	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	19:07	4	X	-9999.	0.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	19:07	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	19:58	4	X	-9999.	-0.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	19:58	0	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	21:17	4	X	175.	-0.2	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	21:17	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	22:17	4	X	-9999.	-0.2	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	22:17	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	23:13	4	X	-9999.	-0.2	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	23:13	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	IN	00:07	4	X	-9999.	0.4	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	DI	00:07	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	IN	01:03	4	X	170.	0.6	17.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	DI	01:03	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	17:52	4	X	160.	0.7	18.7	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/07/76	DI	17:52	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	18:39	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	18:39	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	19:22	4	X	-9999.	0.8	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	19:22	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/07/76	IN	20:09	4	X	160.	0.7	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:09	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	20:59	4	X	-9999.	0.6	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:59	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	22:46	0	X	160.	0.4	18.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	22:46	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	23:30	0	X	-9999.	0.0	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	23:30	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	00:15	0	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	00:15	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	01:07	0	X	-9999.	-0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	01:07	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	16:41	0	X	145.	0.2	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	16:41	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	17:25	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	17:25	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	18:21	4	X	-9999.	0.7	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	18:21	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	19:07	4	X	-9999.	0.8	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	19:07	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	19:59	4	X	-9999.	0.9	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	19:59	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	20:48	4	X	160.	1.1	18.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	20:48	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	IN	22:26	4	X	-9999.	0.6	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	22:26	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	23:15	4	X	-9999.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	23:15	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:04	4	X	150.	0.2	18.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	00:04	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:48	4	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	00:48	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	17:15	4	X	160.	0.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:15	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:10	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:10	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:59	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:59	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:49	4	X	160.	0.9	19.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:49	0	X	-9999.	-9.9	27.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:39	4	X	140.	1.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:39	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:27	4	X	-9999.	1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:27	0	X	-9999.	-9.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:04	4	X	160.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:04	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:49	4	X	-9999.	0.7	19.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	DI	23:49	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	00:43	4	X	160.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	00:43	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:08	4	X	165.	-0.3	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:08	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:55	4	X	-9999.	0.1	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:55	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:41	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:41	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	19:20	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	19:20	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	20:06	4	X	165.	0.8	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:06	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:54	4	X	165.	1.0	19.8	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/76	DI	20:54	4	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	22:30	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	22:30	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/76	IN	23:12	4	X	-9999.	0.9	20.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/10/76	DI	23:12	0	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	24:00	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	24:00	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:50	4	X	160.	0.4	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:50	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:00	4	X	210.	0.0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:00	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	IN	17:55	4	X	-9999.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:55	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	18:40	4	X	-9999.	-0.3	19.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/14/76	DI	18:40	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	19:29	4	X	-9999.	-0.4	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	19:29	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	20:17	4	X	-9999.	-0.4	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	20:17	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	21:09	4	X	210.	0.0	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	21:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	22:43	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:43	0	X	-9999.	-9.9	27.0	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2
06/14/76	IN	23:30	4	X	-9999.	0.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:30	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	00:14	4	X	-9999.	0.8	19.5	2	0	0	2	0	2	0	2	0	2	0	2	0	1	1	1	1
06/15/76	DI	00:14	0	X	-9999.	-9.9	26.0	1	1	1	2	1	2	1	2	1	1	2	1	2	1	2	1	2
06/15/76	IN	01:01	4	X	190.	0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:01	0	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	16:58	4	X	200.	0.1	19.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	16:58	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	18:37	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	18:37	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/15/76	IN	19:26	4	X	-9999.	-0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	19:26	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	20:16	4	X	-9999.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	20:16	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:38	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:38	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:27	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:27	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	23:13	4	X	190.	0.4	20.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	23:13	0	X	-9999.	-9.9	30.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	00:02	4	X	-9999.	-0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:02	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:47	4	X	180.	0.7	20.0	3	0	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1
06/16/76	DI	00:47	0	X	-9999.	-9.9	28.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	16:24	4	X	190.	0.6	20.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	16:24	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:11	4	X	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:03	4	X	-9999.	0.1	21.0	9	0	1	9	1	9	1	8	2	5	5	4	6	4	6	3	7
06/16/76	DI	18:03	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:02	4	X	-9999.	0.0	21.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/16/76	DI	19:02	0	X	-9999.	-9.9	28.0	1	1	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/16/76	IN	19:50	4	X	-9999.	-0.1	20.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	19:50	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:42	4	X	190.	-0.3	20.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:42	0	X	-9999.	-9.9	24.5	2	1	1	3	1	2	2	2	2	2	2	0	4	0	4	0	4
06/16/76	IN	21:29	4	X	-9999.	-0.2	20.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/16/76	DI	21:29	0	X	-9999.	-9.9	24.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/16/76	IN	23:05	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:05	0	X	-9999.	-9.9	21.5	14	2	3	15	4	10	9	6	13	4	15	1	18	1	18	0	19
06/16/76	IN	23:53	4	X	-9999.	0.4	20.0	2	1	0	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/16/76	DI	23:53	0	X	-9999.	-9.9	21.0	3	1	7	2	9	2	9	2	9	2	9	2	9	2	9	2	9

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	16:33	4	X	180.	0.6	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:33	0	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	17:19	4	X	-9999.	0.5	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	17:19	0	X	-9999.	-9.9	22.0	1	1	1	1	2	1	2	1	2	0	3	0	3	0	3	0	3
06/17/76	IN	18:05	4	X	-9999.	0.2	21.0	7	1	0	7	1	7	1	5	3	5	3	5	3	4	4	4	4
06/17/76	DI	18:05	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:49	4	X	-9999.	0.1	21.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	18:49	0	X	-9999.	-9.9	22.5	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/17/76	IN	19:35	4	X	-9999.	0.0	21.0	4	0	0	4	0	3	1	3	1	3	1	3	1	2	2	2	2
06/17/76	DI	19:35	0	X	-9999.	-9.9	22.0	2	0	0	2	0	2	0	2	0	2	0	1	1	1	1	1	1
06/17/76	IN	20:23	4	X	-9999.	-0.2	20.5	2	0	1	2	1	0	3	0	3	0	3	0	3	0	3	0	3
06/17/76	DI	20:23	0	X	-9999.	-9.9	21.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/76	IN	21:08	4	X	175.	-0.2	20.6	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/17/76	DI	21:08	0	X	-9999.	-9.9	21.0	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
06/17/76	IN	22:38	4	X	-9999.	-0.3	20.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	22:38	0	X	-9999.	-9.9	21.0	1	1	0	2	0	2	0	2	0	1	1	1	1	1	1	1	1
06/17/76	IN	23:23	4	X	-9999.	-0.1	21.0	2	0	2	1	3	1	3	0	4	0	4	0	4	0	4	0	4
06/17/76	DI	23:23	0	X	-9999.	-9.9	21.0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/18/76	IN	00:10	4	X	-9999.	0.1	20.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/76	DI	00:10	0	X	-9999.	-9.9	21.0	6	1	9	5	11	4	12	4	12	4	12	2	14	2	14	2	14
06/18/76	IN	00:55	4	X	170.	0.4	21.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/18/76	DI	00:55	0	X	-9999.	-9.9	21.0	3	1	4	3	5	3	5	3	5	2	6	2	6	1	7	1	7
06/21/76	IN	16:40	4	X	140.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	17:27	4	X	151.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	17:27	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	IN	18:15	4	X	150.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	18:15	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:03	4	X	150.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:03	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:48	4	X	150.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:48	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/21/76	IN	20:30	4	X	150.	0.6	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/21/76	DI	20:30	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:17	4	X	160.	0.5	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	DI	21:17	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	IN	23:11	4	X	170.	0.3	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:11	0	X	-9999.	-9.9	28.0	1	0	1	1	1	1	1	1	1	1	1	1	1	0	2	0	2
06/21/76	IN	23:56	4	X	250.	0.2	23.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	DI	23:56	0	X	-9999.	-9.9	28.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	IN	00:41	4	X	350.	0.0	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	00:41	0	X	-9999.	-9.9	28.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/22/76	IN	16:37	4	X	-9999.	0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	16:37	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	17:25	4	X	240.	0.5	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:10	4	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:10	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:57	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:57	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:44	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:44	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:36	2	X	-9999.	0.7	23.0	1	1	1	1	2	1	2	1	2	1	2	0	3	0	3	0	3
06/22/76	DI	20:36	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	IN	21:23	2	X	260.	0.6	22.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	21:23	0	X	-9999.	-9.9	33.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	IN	22:59	2	X	-9999.	0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:46	2	X	-9999.	0.2	22.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/22/76	DI	23:46	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:37	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:19	2	X	260.	-0.1	22.4	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	01:19	0	X	-9999.	-9.9	31.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	16:12	2	X	-9999.	0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:12	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:59	2	X	450.	0.2	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:45	2	X	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	2	X	-9999.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:15	2	X	400.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:01	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:01	0	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/23/76	IN	20:45	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:28	4	X	-9999.	0.8	22.0	3	0	0	3	0	3	0	3	0	3	0	2	1	2	1	2	1	1
06/23/76	DI	21:28	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:02	4	X	420.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:02	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:48	4	X	460.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:48	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/24/76	IN	00:31	4	X	600.	0.1	22.5	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
06/24/76	DI	00:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:09	4	X	750.	0.0	23.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/24/76	DI	01:09	0	X	-9999.	-9.9	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	2
06/24/76	IN	16:20	4	X	770.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:20	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:07	0	X	815.	0.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:52	4	X	-9999.	0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:52	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/24/76	IN	18:38	4	X	-9999.	0.5	23.0	1	0	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3	3
06/24/76	DI	18:38	0	X	-9999.	-9.9	33.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/76	IN	19:30	4	X	-9999.	0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:18	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:18	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:04	4	X	790.	0.8	23.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	DI	21:04	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:55	4	X	-9999.	0.8	23.5	4	0	0	4	0	2	2	2	2	2	2	2	2	2	2	1	3
06/24/76	DI	21:55	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:30	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/25/76	IN	00:17	4	X	-9999.	0.3	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/25/76	DI	00:17	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	IN	01:00	4	X	960.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:00	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	16:30	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	16:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:24	4	X	2210.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:13	4	X	-9999.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:02	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:02	0	X	-9999.	-9.9	34.0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/28/76	IN	19:55	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:55	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:46	4	X	-9999.	0.4	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:46	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	22:52	4	X	2170.	0.9	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:42	4	X	-9999.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:42	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	00:30	4	X	-9999.	0.9	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	DI	00:30	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	IN	01:11	4	X	2080.	0.8	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	DI	01:11	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:55	4	X	1940.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:55	0	X	-9999.	-9.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	IN	20:40	4	X	-9999.	0.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	20:40	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	21:27	4	X	1800.	0.5	24.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/29/76	DI	21:27	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	IN	22:15	4	X	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:15	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	IN	22:58	4	X	-9999.	0.9	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:58	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	23:41	4	X	-9999.	1.0	24.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
06/29/76	DI	23:41	0	X	2050.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:28	4	X	-9999.	1.0	24.0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/30/76	DI	00:28	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	01:10	4	X	1940.	1.0	23.8	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	DI	01:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:13	4	X	1670.	0.2	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:13	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:17	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:07	4	X	1500.	0.5	23.8	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/30/76	DI	22:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:54	4	X	-9999.	0.8	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	DI	22:54	0	X	-9999.	-9.9	34.0	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
06/30/76	IN	23:40	4	X	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	00:40	4	X	1570.	1.1	23.6	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	00:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:32	4	X	1360.	0.3	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:32	0	X	-9999.	-9.9	25.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/76	IN	18:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:17	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:08	4	X	-9999.	0.1	24.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	19:08	0	X	-9999.	-9.9	24.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	IN	19:55	4	X	-9999.	0.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	19:55	0	X	-9999.	-9.9	24.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	IN	20:45	4	X	1100.	0.0	24.3	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/01/76	DI	20:45	0	X	-9999.	-9.9	24.5	3	0	0	3	0	3	0	3	0	3	0	2	1	2	1	2	1
07/01/76	IN	21:33	4	X	-9999.	0.1	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	21:33	0	X	-9999.	-9.9	24.5	3	0	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1
07/01/76	IN	23:07	4	X	-9999.	0.6	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/01/76	DI	23:07	0	X	-9999.	-9.9	24.5	5	0	4	5	4	5	4	4	5	4	5	4	5	4	5	3	6
07/01/76	IN	23:52	4	X	-9999.	0.8	24.0	3	0	0	3	0	2	1	2	1	2	1	2	1	1	2	0	3
07/01/76	DI	23:52	0	X	-9999.	-9.9	24.5	5	1	2	6	2	6	2	6	2	6	2	6	2	6	2	6	2
07/02/76	IN	00:36	4	X	-9999.	0.8	24.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/02/76	DI	00:36	0	X	-9999.	-9.9	24.0	3	2	2	2	5	2	5	2	5	2	5	1	6	1	6	1	6
07/02/76	IN	01:19	4	X	990.	0.9	24.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/02/76	DI	01:19	0	X	-9999.	-9.9	24.5	5	1	2	6	2	6	2	6	2	6	2	6	2	6	2	5	3
07/06/76	IN	16:31	4	X	210.	0.6	26.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	16:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:12	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:12	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:54	4	X	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:35	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:35	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:15	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:15	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:57	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:57	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:38	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:38	0	X	-9999.	-9.9	35.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/06/76	IN	21:19	4	X	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:19	0	X	-9999.	-9.9	34.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	22:48	4	X	-9999.	0.2	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/06/76	DI	22:48	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	23:31	4	X	210.	0.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:31	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	00:12	4	X	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:12	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:51	4	X	210.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:51	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	16:52	5	X	180.	0.5	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	16:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:32	5	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:32	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:13	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	18:52	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:31	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:31	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:10	5	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:10	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:49	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:49	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:29	5	X	270.	0.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:29	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	22:45	5	X	-9999.	0.5	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/07/76	DI	22:45	0	X	-9999.	-9.9	34.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/07/76	IN	23:24	5	X	-9999.	0.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:24	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	00:04	5	X	-9999.	0.2	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	00:04	0	X	-9999.	-9.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	IN	00:40	5	X	1040.	0.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:14	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:14	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:25	4	X	-9999.	0.5	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	23:25	0	X	-9999.	-9.9	32.0	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/12/76	IN	16:36	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:36	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	1
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	2
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	1
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	17:15	4	X	140.	0.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:15	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:10	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:10	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:59	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:59	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:49	4	X	160.	0.9	19.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:49	0	X	-9999.	-9.9	27.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:39	4	X	140.	1.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:39	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:27	4	X	-9999.	1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:27	0	X	-9999.	-9.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:04	4	X	160.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:04	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:49	4	X	-9999.	0.7	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:49	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	00:43	4	X	160.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	00:43	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:08	4	X	165.	-0.3	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:08	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:55	4	X	-9999.	0.1	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:55	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:41	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:41	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	19:20	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	19:20	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:06	4	X	165.	0.8	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:06	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:54	4	X	165.	1.0	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:54	4	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	22:30	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	22:30	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/76	IN	23:12	4	X	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	24:00	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	24:00	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:50	4	X	160.	0.4	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:50	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:00	4	X	210.	0.0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:00	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:55	4	X	-9999.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:55	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	18:40	4	X	-9999.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	18:40	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	19:29	4	X	-9999.	-0.4	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	19:29	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	20:17	4	X	-9999.	-0.4	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	20:17	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	21:09	4	X	210.	0.0	19.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	DI	21:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	22:43	4	X	-9999.	0.5	19.5	1	0	1	1	1	1	1	1	1	1	1	0	2	0	2	0	2
06/24/76	DI	22:43	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	23:30	4	X	-9999.	0.7	19.5	1	1	0	2	0	1	1	1	1	1	1	0	2	0	2	0	2
06/14/76	DI	23:30	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	00:14	4	X	-9999.	0.8	19.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/15/76	DI	00:14	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	01:01	4	X	190.	0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:01	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	16:58	4	X	200.	0.1	19.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	16:58	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	18:37	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	18:37	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/15/76	IN	19:26	4	X	-9999.	-0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	19:26	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	20:16	4	X	-9999.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	20:16	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	21:38	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:38	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:27	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:27	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	23:13	4	X	190.	0.4	20.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	23:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:02	4	X	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:02	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:47	4	X	180.	0.7	20.0	3	0	0	3	0	3	0	3	0	2	1	1	2	0	3	0	3	
06/16/76	DI	00:47	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	16:24	4	X	190.	0.6	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	16:24	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:11	4	X	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:03	4	X	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:03	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:02	4	X	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:02	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:50	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:50	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:42	4	X	190.	-0.3	20.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:42	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	21:29	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:29	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:05	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:05	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:53	4	X	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:53	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/21/76	IN	20:30	4	X	150.	0.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:30	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:17	4	X	160.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	21:17	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:11	4	X	170.	0.3	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:11	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:56	4	X	250.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:56	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	00:41	4	X	350.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	00:41	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	16:37	4	X	-9999.	0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	16:37	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	17:25	4	X	240.	0.5	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:10	4	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:10	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:57	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:57	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:44	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:44	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:36	2	X	-9999.	0.7	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	20:36	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:23	2	X	260.	0.6	22.5	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
06/22/76	DI	21:23	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:59	2	X	-9999.	0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:46	2	X	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:46	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:37	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:19	2	X	260.	-0.1	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:19	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)
ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	16:12	2	X	-9999.	0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:12	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:59	2	X	450.	0.2	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:45	2	X	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	2	X	-9999.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:15	2	X	400.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:01	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:01	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:45	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:28	4	X	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:28	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:02	4	X	420.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:02	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:48	4	X	460.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:48	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	00:31	4	X	600.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:09	4	X	750.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	01:09	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	16:20	4	X	770.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:20	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:07	0	X	815.	0.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:52	4	X	-9999.	0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:52	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:38	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:38	0	X	-9999.	-9.9	33.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/06/76	IN	21:19	4	X	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:19	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	22:48	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:48	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:31	4	X	210.	0.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:12	4	X	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:12	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:51	4	X	210.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:51	0	X	-9999.	-9.9	30.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	1
07/07/76	IN	16:52	5	X	180.	0.5	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	16:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:32	5	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:32	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:13	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:52	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:31	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:31	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:10	5	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:10	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:49	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	20:49	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	21:29	5	X	270.	0.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:29	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	22:45	5	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	23:24	5	X	-9999.	0.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:24	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:04	5	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:04	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	IN	00:40	5	X	1040.	0.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:14	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:14	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:25	4	X	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	23:25	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	16:36	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:36	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	9	1	0	8	2	8	2	8	2	8	2	8	2	8	2	5	5	
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	3	0	0	3	0	3	0	3	0	3	0	2	1	0	3	0	3	
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	3	1	0	4	0	4	0	3	1	3	1	2	2	1	3	1	3
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	16:36	4	X	230.	0.5	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	16:36	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:15	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:01	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:01	0	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:40	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:18	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:18	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	4	X	-9999.	-0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:35	4	X	190.	0.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:35	0	X	-9999.	-9.9	33.0	2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/15/76	IN	22:13	4	X	-9999.	0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:13	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:51	4	X	-9999.	0.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:30	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:12	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:12	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:50	4	X	185.	0.8	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:50	0	X	-9999.	-9.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	IN	16:55	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	16:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:46	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:30	4	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:16	4	X	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:16	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/26/76	IN	19:57	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:57	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:38	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:20	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:20	0	X	-9999.	-9.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/26/76	IN	22:59	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	22:59	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:43	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:43	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:26	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:26	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:08	4	X	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	01:08	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	16:15	4	X	6970.	-0.2	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	16:56	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:56	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:35	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:35	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:18	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:18	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:00	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:00	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:42	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:42	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:22	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:22	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	21:01	4	X	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	21:01	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	22:36	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	22:36	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	IN	23:17	4	X	7190.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:17	0	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/28/76	IN	00:01	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:01	0	X	-9999.	-9.9	33.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/28/76	IN	00:43	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:43	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	16:44	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	16:44	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:25	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	17:25	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:09	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:56	4	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:56	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:38	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:21	4	X	6880.	0.2	24.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:21	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:03	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:03	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:40	4	X	6890.	0.8	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	23:24	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:05	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:05	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:44	4	X	6810.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:44	0	X	-9999.	-9.9	34.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/29/76	IN	16:34	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	16:34	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:25	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	IN	18:10	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:10	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:02	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:02	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:41	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:41	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:25	4	X	6020.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:25	0	X	-9999.	-9.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/29/76	IN	22:22	4	X	-9999.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:22	0	X	-9999.	-9.9	33.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/29/76	IN	23:00	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:00	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	23:41	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:41	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:30	4	X	6010.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:30	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/76	IN	19:30	4	X	-9999.	0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:18	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:18	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:04	4	X	790.	0.8	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:04	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:55	4	X	-9999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:55	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:30	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:17	4	X	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:17	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:00	4	X	960.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:00	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	16:30	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	16:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:24	4	X	2210.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:13	4	X	-9999.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:02	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:02	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:55	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:55	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:46	4	X	-9999.	0.4	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:52	4	X	2170.	0.9	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:42	4	X	-9999.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:42	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:30	4	X	-9999.	0.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	00:30	0	X	-9999.	-9.9	34.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	IN	01:11	4	X	2080.	0.8	24.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
06/29/76	DI	01:11	0	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	19:55	4	X	1940.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:40	4	X	-9999.	0.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	20:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:27	4	X	1800.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:27	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:15	4	X	-9999.	0.7	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:15	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:58	4	X	-9999.	0.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:58	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:41	4	X	-9999.	1.0	24.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/29/76	DI	23:41	0	X	2050.	-9.9	33.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/30/76	IN	00:28	4	X	-9999.	1.0	24.0	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/30/76	DI	00:28	0	X	-9999.	-9.9	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/30/76	IN	01:10	4	X	1940.	1.0	23.8	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/30/76	DI	01:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:13	4	X	1670.	0.2	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:13	0	X	-9999.	-9.9	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/30/76	IN	21:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:17	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:07	4	X	1500.	0.5	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:54	4	X	-9999.	0.8	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	22:54	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:40	4	X	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	00:40	4	X	1570.	1.1	23.6	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/01/76	DI	00:40	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	17:32	4	X	1360.	0.3	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:32	0	X	-9999.	-9.9	25.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/76	IN	18:17	4	X	-9999.	0.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	18:17	0	X	-9999.	-9.9	25.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/01/76	IN	19:08	4	X	-9999.	0.1	24.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	DI	19:08	0	X	-9999.	-9.9	24.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/01/76	IN	19:55	4	X	-9999.	0.0	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	DI	19:55	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	20:45	4	X	1100.	0.0	24.3	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	DI	20:45	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:33	4	X	-9999.	0.1	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	21:33	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	23:07	4	X	-9999.	0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:07	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:52	4	X	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:52	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	00:36	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	00:36	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	01:19	4	X	990.	0.9	24.1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/02/76	DI	01:19	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	16:31	4	X	210.	0.6	26.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	16:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:12	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:12	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:54	4	X	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:35	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:35	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:15	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:15	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:57	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:57	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:38	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:38	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	22:12	4	X	233.	0.6	23.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	16:36	4	X	230.	0.5	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	16:36	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:15	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:01	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:01	0	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:40	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:18	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:18	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	4	X	-9999.	-0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	21:35	4	X	190.	0.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:35	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:13	4	X	-9999.	0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:13	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:51	4	X	-9999.	0.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:30	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:12	4	X	-9999.	0.8	26.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/16/76	DI	00:12	0	X	-9999.	-9.9	32.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/16/76	IN	00:50	4	X	185.	0.8	25.8	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/16/76	DI	00:50	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	IN	16:55	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	16:55	0	X	-9999.	-9.9	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/26/76	IN	17:46	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:46	0	X	-9999.	-9.9	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/26/76	IN	18:30	4	X	-9999.	0.0	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	18:30	0	X	-9999.	-9.9	34.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/26/76	IN	19:16	4	X	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:16	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/26/76	IN	19:57	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:57	0	X	-9999.	-9.9	34.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/26/76	IN	20:38	4	X	-9999.	0.8	24.5	1	0	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/26/76	DI	20:38	0	X	-9999.	-9.9	34.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/26/76	IN	21:20	4	X	-9999.	0.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	21:20	0	X	-9999.	-9.9	33.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/26/76	IN	22:59	4	X	-9999.	1.0	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	22:59	0	X	-9999.	-9.9	34.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/26/76	IN	23:43	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:43	0	X	-9999.	-9.9	33.5	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/27/76	DI	00:26	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:26	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:08	4	X	-9999.	0.6	24.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/27/76	DI	01:08	0	X	-9999.	-9.9	32.0	0	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15
07/27/76	IN	16:15	4	X	6970.	-0.2	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:15	0	X	-9999.	-9.9	33.5	0	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
07/27/76	IN	16:56	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:56	0	X	-9999.	-9.9	33.5	0	1	14	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15
07/27/76	IN	17:35	4	X	-9999.	-0.2	24.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/27/76	DI	17:35	0	X	-9999.	-9.9	33.5	0	0	29	0	29	0	29	0	29	0	29	0	29	0	29	0	29	0	29
07/27/76	IN	18:18	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:18	0	X	-9999.	-9.9	33.5	0	0	29	0	29	0	29	0	29	0	29	0	29	0	29	0	29	0	29
07/27/76	IN	19:00	4	X	-9999.	-0.1	24.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/27/76	DI	19:00	0	X	-9999.	-9.9	33.5	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/27/76	IN	19:42	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:42	0	X	-9999.	-9.9	33.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/27/76	IN	20:22	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	IN	23:17	4	X	7190.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:17	0	X	-9999.	-9.9	33.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/28/76	IN	00:01	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:01	0	X	-9999.	-9.9	33.5	0	0	29	0	29	0	29	0	29	0	29	0	29	0	29	0	29
07/28/76	IN	00:43	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:43	0	X	-9999.	-9.9	33.5	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/28/76	IN	16:44	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	16:44	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:25	4	X	-9999.	-0.2	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	17:25	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:09	4	X	-9999.	-0.3	25.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/28/76	DI	18:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:56	4	X	-9999.	-0.3	24.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	18:56	0	X	-9999.	-9.9	34.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/28/76	IN	19:38	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:21	4	X	6880.	0.2	24.7	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	20:21	0	X	-9999.	-9.9	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/28/76	IN	21:03	4	X	-9999.	0.4	25.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	21:03	0	X	-9999.	-9.9	34.0	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/28/76	IN	22:40	4	X	6890.	0.8	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:40	0	X	-9999.	-9.9	34.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/28/76	IN	23:24	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:24	0	X	-9999.	-9.9	34.0	0	0	30	0	30	0	30	0	30	0	30	0	30	0	30	0	30
07/29/76	IN	00:05	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:05	0	X	-9999.	-9.9	34.0	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/29/76	IN	00:44	4	X	6810.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:44	0	X	-9999.	-9.9	34.0	0	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13
07/29/76	IN	16:34	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	16:34	0	X	-9999.	-9.9	34.0	0	0	60	0	60	0	60	0	60	0	60	0	60	0	60	0	60
07/29/76	IN	17:25	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	64	0	64	0	64	0	64	0	64	0	64	0	64	0	64

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	IN	18:10	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:10	0	X	-9999.	-9.9	34.0	0	0	52	0	52	0	52	0	52	0	52	0	52	0	52	0	52
07/29/76	IN	19:02	4	X	-9999.	-0.2	25.0	1	0	7	1	7	1	7	1	7	0	8	0	8	0	8	0	8
07/29/76	DI	19:02	0	X	-9999.	-9.9	33.0	0	0	140	0	140	0	140	0	140	0	140	0	140	0	140	0	140
07/29/76	IN	19:41	4	X	-9999.	-0.2	24.5	1	0	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/29/76	DI	19:41	0	X	-9999.	-9.9	34.0	0	1	93	1	93	0	94	0	94	0	94	0	94	0	94	0	94
07/29/76	IN	20:25	4	X	6020.	0.1	25.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/29/76	DI	20:25	0	X	-9999.	-9.9	33.0	0	2	103	0	105	0	105	0	105	0	105	0	105	0	105	0	105
07/29/76	IN	22:22	4	X	-9999.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:22	0	X	-9999.	-9.9	33.5	0	0	52	0	52	0	52	0	52	0	52	0	52	0	52	0	52
07/29/76	IN	23:00	4	X	-9999.	0.8	25.0	0	1	5	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/29/76	DI	23:00	0	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	IN	23:41	4	X	-9999.	0.9	24.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/29/76	DI	23:41	0	X	-9999.	-9.9	33.0	0	0	46	0	46	0	46	0	46	0	46	0	46	0	46	0	46
07/30/76	IN	00:30	4	X	6010.	1.0	24.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/30/76	DI	00:30	0	X	-9999.	-9.9	31.0	0	0	80	0	80	0	80	0	80	0	80	0	80	0	80	0	80

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- YOLK SAC LA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	IN	00:40	5	X	1040.	0.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:14	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:14	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:25	4	X	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	23:25	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	16:36	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:36	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- YOLK SAC LA

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	IN	18:10	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:10	0	X	-9999.	-9.9	34.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/29/76	IN	19:02	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:02	0	X	-9999.	-9.9	33.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/29/76	IN	19:41	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:41	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:25	4	X	6020.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	22:22	4	X	-9999.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:22	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	23:00	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:00	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	23:41	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	23:41	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	IN	00:30	4	X	6010.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:30	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	16:36	4	X	230.	0.5	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	16:36	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:15	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:01	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:01	0	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:40	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:18	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:18	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	4	X	-9999.	-0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:35	4	X	190.	0.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:35	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	IN	22:13	4	X	-9999.	0.2	24.0	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	DI	22:13	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:51	4	X	-9999.	0.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:30	4	X	-9999.	0.8	26.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/15/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:12	4	X	-9999.	0.8	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/16/76	DI	00:12	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.	0	0
07/16/76	IN	00:50	4	X	185.	0.8	25.8	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/16/76	DI	00:50	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	IN	16:55	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	16:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:46	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:30	4	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:16	4	X	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:16	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/26/76	IN	19:57	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:57	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:38	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:38	0	X	-9999.	-9.9	34.0	0	2	20	0	22	0	22	0	22	0	22	0	22	0	22	0	22
07/26/76	IN	21:20	4	X	-9999.	0.9	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	DI	21:20	0	X	-9999.	-9.9	33.0	0	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/26/76	IN	22:59	4	X	-9999.	1.0	25.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
07/26/76	DI	22:59	0	X	-9999.	-9.9	34.0	0	2	10	0	12	0	12	0	12	0	12	0	12	0	12	0	12
07/26/76	IN	23:43	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	23:43	0	X	-9999.	-9.9	33.5	0	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9
07/27/76	DI	00:26	0	X	-9999.	-9.9	34.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/27/76	IN	00:26	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	01:08	4	X	-9999.	0.6	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	01:08	0	X	-9999.	-9.9	32.0	0	1	9	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/27/76	IN	16:15	4	X	6970.	-0.2	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	16:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	16:56	4	X	-9999.	-0.2	24.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
07/27/76	DI	16:56	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	17:35	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	17:35	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	18:18	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	18:18	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:00	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:00	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	19:42	4	X	-9999.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	19:42	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	20:22	4	X	-9999.	0.5	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	20:22	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/27/76	IN	21:01	4	X	-9999.	0.6	24.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/27/76	DI	21:01	0	X	-9999.	-9.9	33.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/27/76	IN	22:36	4	X	-9999.	0.9	24.5	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
07/27/76	DI	22:36	0	X	-9999.	-9.9	33.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/27/76	IN	23:17	4	X	7190.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	23:17	0	X	-9999.	-9.9	33.5	0	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23	0	23
07/28/76	IN	00:01	4	X	-9999.	0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:01	0	X	-9999.	-9.9	33.5	0	0	26	0	26	0	26	0	26	0	26	0	26	0	26	0	26	0	26
07/28/76	IN	00:43	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	00:43	0	X	-9999.	-9.9	33.5	0	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14
07/28/76	IN	16:44	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	16:44	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:25	4	X	-9999.	-0.2	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	17:25	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:09	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:56	4	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:56	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	19:38	4	X	-9999.	-0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:38	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:21	4	X	6880.	0.2	24.7	2	0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	20:21	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	IN	21:03	4	X	-9999.	0.4	25.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	DI	21:03	0	X	-9999.	-9.9	34.0	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/28/76	IN	22:40	4	X	6890.	0.8	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:40	0	X	-9999.	-9.9	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/28/76	IN	23:24	4	X	-9999.	1.0	25.0	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	23:24	0	X	-9999.	-9.9	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/29/76	IN	00:05	4	X	-9999.	1.0	25.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
07/29/76	DI	00:05	0	X	-9999.	-9.9	34.0	0	1	10	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11
07/29/76	IN	00:44	4	X	6810.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:44	0	X	-9999.	-9.9	34.0	0	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6
07/29/76	IN	16:34	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	16:34	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	17:25	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/29/76	IN	18:10	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	18:10	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	19:02	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:02	0	X	-9999.	-9.9	33.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/29/76	IN	19:41	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	19:41	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	20:25	4	X	6020.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	20:25	0	X	-9999.	-9.9	33.0	1	5	23	1	28	1	28	0	29	0	29	0	29	0	29	0	29
07/29/76	IN	22:22	4	X	-9999.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	22:22	0	X	-9999.	-9.9	33.5	0	1	15	1	15	0	16	0	16	0	16	0	16	0	16	0	16
07/29/76	IN	23:00	4	X	-9999.	0.8	25.0	2	0	2	2	2	2	2	2	2	1	3	0	4	0	4	0	4
07/29/76	DI	23:00	0	X	-9999.	-9.9	33.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/29/76	IN	23:41	4	X	-9999.	0.9	24.5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/29/76	DI	23:41	0	X	-9999.	-9.9	33.0	0	1	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/30/76	IN	00:30	4	X	6010.	1.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/76	DI	00:30	0	X	-9999.	-9.9	31.0	3	7	27	3	34	1	36	1	36	0	37	0	37	0	37	0	37

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/15/76	IN	18:41	2	X	1460.	0.4	4.1	0	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/15/76	DI	19:04	0	X	-9999.	-9.9	13.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/15/76	IN	21:00	2	X	-9999.	0.8	4.0	4	1	5	2	8	2	8	2	8	1	9	1	9	1	9	1	9
03/15/76	DI	20:36	0	X	1830.	-9.9	13.2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
03/15/76	IN	22:04	2	X	1415.	0.9	4.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/15/76	DI	21:59	0	X	-9999.	-9.9	13.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/15/76	IN	23:30	2	X	-9999.	0.7	4.5	1	7	8	5	11	4	12	3	13	3	13	3	13	3	13	3	13
03/15/76	DI	23:26	0	X	1650.	-9.9	12.9	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/16/76	IN	00:55	2	X	1435.	0.2	3.9	1	3	0	1	3	1	3	1	3	1	3	1	3	1	3	1	3
03/16/76	DI	00:51	0	X	-9999.	-9.9	9.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/16/76	IN	17:10	2	X	1330.	0.0	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/16/76	DI	17:18	0	X	-9999.	-9.9	13.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/16/76	IN	19:39	2	X	-9999.	0.8	4.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/16/76	DI	19:50	0	X	-9999.	-9.9	13.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/16/76	IN	20:55	2	X	-9999.	1.2	4.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
03/16/76	DI	20:57	0	X	-9999.	-9.9	12.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/16/76	IN	22:39	2	X	1100.	1.4	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/16/76	DI	22:17	0	X	-9999.	-9.9	13.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/17/76	IN	01:13	2	X	-9999.	0.8	4.0	2	1	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
03/17/76	DI	01:31	0	X	-9999.	-9.9	9.0	2	0	2	0	4	0	4	0	4	0	4	0	4	0	4	0	4
03/17/76	IN	17:33	2	X	-9999.	-0.6	4.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/17/76	DI	17:54	0	X	-9999.	-9.9	10.7	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
03/17/76	IN	19:29	2	X	1060.	-0.6	2.9	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/17/76	DI	19:47	0	X	-9999.	-9.9	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/17/76	IN	21:07	2	X	1060.	0.0	3.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/17/76	DI	21:32	0	X	-9999.	-9.9	9.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/17/76	IN	22:57	2	X	-9999.	0.3	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/17/76	DI	23:10	0	X	-9999.	-9.9	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	00:20	2	X	-9999.	0.3	3.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	00:25	0	X	910.	-9.9	11.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	18:12	2	X	-9999.	-0.6	3.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	DI	18:06	0	X	-9999.	-9.9	13.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/18/76	IN	19:34	2	X	540.	-0.6	3.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	DI	19:35	0	X	-9999.	-9.9	12.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
03/18/76	IN	20:35	2	X	-9999.	-0.2	3.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	DI	20:39	0	X	-9999.	-9.9	12.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	21:38	2	X	380.	0.2	3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	21:38	0	X	-9999.	-9.9	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	22:43	2	X	-9999.	0.5	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	22:43	0	X	550.	-9.9	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	23:52	2	X	-9999.	0.7	3.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/18/76	DI	23:49	0	X	-9999.	-9.9	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/19/76	IN	00:58	2	X	410.	0.7	3.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/19/76	DI	01:03	0	X	-9999.	-9.9	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	17:51	4	X	130.	0.2	7.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	18:00	0	X	-9999.	-9.9	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	19:14	4	X	-9999.	0.5	8.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	19:15	0	X	165.	-9.9	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	20:33	4	X	-9999.	0.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	20:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	21:33	4	X	130.	1.1	7.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	21:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	22:35	4	X	-9999.	1.2	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	22:37	0	X	165.	-9.9	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	23:45	4	X	-9999.	0.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	23:55	0	X	-9999.	-9.9	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	IN	01:00	4	X	-9999.	0.7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	DI	01:00	0	X	-9999.	-9.9	13.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	IN	00:30	4	X	128.	0.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	DI	00:30	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	IN	23:15	4	X	140.	-0.3	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	DI	23:15	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/76	IN	01:11	4	X	140.	0.0	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/76	DI	01:11	0	X	-9999.	-9.9	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- YOLK SA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/15/76	IN	18:41	2	X	1460.	0.4	4.1	3	6	0	9	0	8	1	7	2	7	2	7	2	7	2	7	2
03/15/76	DI	19:04	0	X	-9999.	-9.9	13.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
03/15/76	IN	21:00	2	X	-9999.	0.8	4.0	14	16	1	24	7	23	8	20	11	20	11	20	11	20	11	20	11
03/15/76	DI	20:36	0	X	1830.	-9.9	13.2	15	3	0	17	1	17	1	17	1	17	1	17	1	17	1	17	1
03/15/76	IN	22:04	2	X	1415.	0.9	4.0	3	3	2	5	3	4	4	4	4	4	4	4	4	4	4	4	4
03/15/76	DI	21:59	0	X	-9999.	-9.9	13.0	9	1	0	9	1	9	1	9	1	9	1	9	1	9	1	9	1
03/15/76	IN	23:30	2	X	-9999.	0.7	4.5	14	33	6	38	17	32	23	32	23	32	23	32	23	32	23	30	25
03/15/76	DI	23:26	0	X	1650.	-9.9	12.9	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
03/16/76	IN	00:55	2	X	1435.	0.2	3.9	5	1	7	5	8	5	8	5	8	5	8	5	8	5	8	5	8
03/16/76	DI	00:51	0	X	-9999.	-9.9	9.5	10	1	0	10	1	10	1	10	1	10	1	10	1	10	1	10	1
03/16/76	IN	17:10	2	X	1330.	0.0	3.7	5	6	2	9	4	9	4	9	4	9	4	9	4	9	4	9	4
03/16/76	DI	17:18	0	X	-9999.	-9.9	13.5	2	3	1	5	1	4	2	4	2	4	2	4	2	4	2	4	2
03/16/76	IN	19:39	2	X	-9999.	0.8	4.0	7	5	4	8	8	8	8	8	8	8	8	8	8	8	8	8	8
03/16/76	DI	19:50	0	X	-9999.	-9.9	13.5	3	2	1	5	1	5	4	5	1	5	1	5	1	5	1	5	1
03/16/76	IN	20:55	2	X	-9999.	1.2	4.0	5	4	3	5	7	5	7	5	7	5	7	5	7	5	7	5	7
03/16/76	DI	20:57	0	X	-9999.	-9.9	12.8	3	1	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0
03/16/76	IN	22:39	2	X	1100.	1.4	3.0	5	1	2	5	3	5	3	5	3	5	3	5	3	5	3	5	3
03/16/76	DI	22:17	0	X	-9999.	-9.9	13.0	1	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
03/17/76	IN	01:13	2	X	-9999.	0.8	4.0	5	9	4	14	4	14	4	11	7	11	7	11	7	11	7	11	7
03/17/76	DI	01:31	0	X	-9999.	-9.9	9.0	5	4	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0
03/17/76	IN	17:33	2	X	-9999.	-0.6	4.0	5	8	3	11	5	9	7	9	7	9	7	9	7	9	7	7	9
03/17/76	DI	17:54	0	X	-9999.	-9.9	10.7	12	0	0	11	1	11	1	11	1	11	1	11	1	11	1	11	1
03/17/76	IN	19:29	2	X	1060.	-0.6	2.9	3	4	2	7	2	7	2	7	2	7	2	7	2	7	2	6	3
03/17/76	DI	19:47	0	X	-9999.	-9.9	12.0	6	3	0	7	2	7	2	6	3	6	3	6	3	6	3	6	3
03/17/76	IN	21:07	2	X	1060.	0.0	3.5	2	5	1	5	3	4	4	4	4	4	4	4	4	4	4	4	4
03/17/76	DI	21:32	0	X	-9999.	-9.9	9.0	2	5	0	3	4	3	4	3	4	3	4	3	4	3	4	3	4
03/17/76	IN	22:57	2	X	-9999.	0.3	3.0	2	3	2	5	2	5	2	3	4	3	4	3	4	3	4	3	4
03/17/76	DI	23:10	0	X	-9999.	-9.9	12.0	3	1	0	4	0	4	0	4	0	3	1	3	1	3	1	3	1
03/18/76	IN	00:20	2	X	-9999.	0.3	3.0	7	0	0	6	1	6	1	6	1	6	1	6	1	6	1	6	1
03/18/76	DI	00:25	0	X	910.	-9.9	11.7	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
03/18/76	IN	18:12	2	X	-9999.	-0.6	3.0	5	6	6	8	9	7	10	4	13	4	13	4	13	4	13	4	13
03/18/76	DI	18:06	0	X	-9999.	-9.9	13.0	7	2	0	8	1	8	1	8	1	8	1	8	1	8	1	8	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- YOLK SA

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/18/76	IN	19:34	2	X	540.	-0.6	3.5	2	0	4	2	4	2	4	2	4	2	4	2	4	2	4	2	4
03/18/76	DI	19:35	0	X	-9999.	-9.9	12.5	3	1	0	4	0	3	1	2	2	2	2	2	2	2	2	2	2
03/18/76	IN	20:35	2	X	-9999.	-0.2	3.0	7	0	0	7	0	7	0	6	1	6	1	6	1	6	1	6	1
03/18/76	DI	20:39	0	X	-9999.	-9.9	12.3	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
03/18/76	IN	21:38	2	X	380.	0.2	3.9	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
03/18/76	DI	21:38	0	X	-9999.	-9.9	12.5	2	1	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1
03/18/76	IN	22:43	2	X	-9999.	0.5	4.0	2	2	0	4	0	4	0	3	1	2	2	2	2	2	2	2	2
03/18/76	DI	22:43	0	X	550.	-9.9	13.1	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
03/18/76	IN	23:52	2	X	-9999.	0.7	3.5	4	5	1	7	3	7	3	5	5	5	5	5	5	5	5	5	5
03/18/76	DI	23:49	0	X	-9999.	-9.9	12.5	6	2	1	8	1	8	1	7	2	7	2	7	2	7	2	7	2
03/19/76	IN	00:58	2	X	410.	0.7	3.9	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
03/19/76	DI	01:03	0	X	-9999.	-9.9	11.5	2	1	1	1	3	1	3	1	3	1	3	1	3	1	3	1	3
03/30/76	IN	17:51	4	X	130.	0.2	7.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	18:00	0	X	-9999.	-9.9	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	19:14	4	X	-9999.	0.5	8.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
03/30/76	DI	19:15	0	X	165.	-9.9	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	20:33	4	X	-9999.	0.9	7.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/30/76	DI	20:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	21:33	4	X	130.	1.1	7.1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
03/30/76	DI	21:28	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	22:35	4	X	-9999.	1.2	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	22:37	0	X	165.	-9.9	16.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	IN	23:45	4	X	-9999.	0.9	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/30/76	DI	23:55	0	X	-9999.	-9.9	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	IN	01:00	4	X	-9999.	0.7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/31/76	DI	01:00	0	X	-9999.	-9.9	13.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	IN	00:30	4	X	128.	0.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/18/76	DI	00:30	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	IN	23:15	4	X	140.	-0.3	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/19/76	DI	23:15	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/76	IN	01:11	4	X	140.	0.0	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/20/76	DI	01:11	0	X	-9999.	-9.9	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TEMCOD- JUV/ADU

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/07/76	IN	20:09	4	X	160.	0.7	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:09	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	20:59	4	X	-9999.	0.6	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:59	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	22:46	0	X	160.	0.4	18.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	22:46	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	23:30	0	X	-9999.	0.0	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	23:30	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	00:15	0	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	00:15	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	01:07	0	X	-9999.	-0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	01:07	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	16:41	0	X	145.	0.2	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	16:41	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	17:25	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	17:25	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	18:21	4	X	-9999.	0.7	18.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	
06/08/76	DI	18:21	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	19:07	4	X	-9999.	0.8	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	19:07	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	19:59	4	X	-9999.	0.9	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	19:59	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	20:48	4	X	160.	1.1	18.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	20:48	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	22:26	4	X	-9999.	0.6	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	22:26	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	23:15	4	X	-9999.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	23:15	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:04	4	X	150.	0.2	18.6	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	
06/09/76	DI	00:04	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:48	4	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	00:48	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
05/24/76	IN	17:55	4	X	130.	0.5	15.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	17:55	0	X	-9999.	-9.9	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/24/76	IN	19:40	4	X	130.	0.8	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	19:40	0	X	-9999.	-9.9	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/24/76	IN	22:04	4	X	130.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	22:04	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	IN	23:57	4	X	-9999.	0.4	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/24/76	DI	23:57	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	01:13	4	X	130.	0.2	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	01:13	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	17:15	4	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	17:15	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	18:35	4	X	122.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	18:35	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	21:00	4	X	120.	1.1	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	21:00	0	X	-9999.	-9.9	21.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/25/76	IN	23:25	4	X	120.	1.0	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	23:25	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	IN	23:48	4	X	120.	0.6	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/25/76	DI	23:48	0	X	-9999.	-9.9	19.5	0	2	1	1	2	1	2	1	2	0	3	0	3	0	3	0	3
05/26/76	IN	17:50	4	X	160.	0.2	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	17:50	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	19:17	4	X	-9999.	0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	19:17	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	20:46	4	X	-9999.	0.8	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	20:46	0	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
05/26/76	IN	22:13	4	X	160.	0.9	16.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	22:13	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	IN	23:36	4	X	-9999.	0.7	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/26/76	DI	23:36	0	X	-9999.	-9.9	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
05/27/76	IN	01:02	4	X	160.	0.3	16.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	DI	01:02	0	X	-9999.	-9.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/02/76	IN	21:05	4	X	190.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	21:05	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	22:25	4	X	-9999.	0.4	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	22:25	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	23:57	4	X	175.	0.8	17.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	23:57	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	01:15	4	X	180.	1.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	01:15	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	17:12	4	X	180.	0.5	17.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	17:12	0	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/03/76	IN	18:12	4	X	-9999.	0.2	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	18:12	0	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/76	IN	19:07	4	X	-9999.	0.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	19:07	0	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/76	IN	19:58	4	X	-9999.	-0.1	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	19:58	0	X	-9999.	-0.2	24.0	1	1	4	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/03/76	IN	21:17	4	X	175.	-0.2	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	21:17	0	X	-9999.	-9.9	23.5	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/03/76	IN	22:17	4	X	-9999.	-0.2	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	22:17	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	23:13	4	X	-9999.	-0.2	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	23:13	0	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/76	IN	00:07	4	X	-9999.	0.4	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	DI	00:07	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	IN	01:03	4	X	170.	0.6	17.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	DI	01:03	0	X	-9999.	-9.9	21.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/07/76	IN	17:52	4	X	160.	0.7	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	17:52	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	18:39	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	18:39	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	19:22	4	X	-9999.	0.8	18.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/07/76	DI	19:22	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/07/76	IN	20:09	4	X	160.	0.7	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:09	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	20:59	4	X	-9999.	0.6	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	20:59	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	22:46	0	X	160.	0.4	18.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	22:46	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	IN	23:30	0	X	-9999.	0.0	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/07/76	DI	23:30	0	X	-9999.	-9.9	22.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/08/76	IN	00:15	0	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	00:15	0	X	-9999.	-9.9	22.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	IN	01:07	0	X	-9999.	-0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	01:07	0	X	-9999.	-9.9	21.5	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/08/76	IN	16:41	0	X	145.	0.2	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	16:41	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	17:25	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	17:25	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	18:21	4	X	-9999.	0.7	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	18:21	0	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	IN	19:07	4	X	-9999.	0.8	18.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	19:07	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	IN	19:59	4	X	-9999.	0.9	18.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	DI	19:59	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/08/76	IN	20:48	4	X	160.	1.1	18.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	20:48	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	22:26	4	X	-9999.	0.6	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	22:26	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	IN	23:15	4	X	-9999.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/08/76	DI	23:15	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:04	4	X	150.	0.2	18.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	00:04	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	00:48	4	X	-9999.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	00:48	0	X	-9999.	-9.9	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	17:15	4	X	160.	0.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:15	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:10	4	X	-9999.	0.5	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:10	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:59	4	X	-9999.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:59	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:49	4	X	160.	0.9	19.3	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	DI	19:49	0	X	-9999.	-9.9	27.9	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	20:39	4	X	140.	1.0	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:39	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:27	4	X	-9999.	1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:27	0	X	-9999.	-9.9	27.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:04	4	X	160.	0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:04	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	23:49	4	X	-9999.	0.7	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	23:49	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	00:43	4	X	160.	0.3	18.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	00:43	0	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	17:08	4	X	165.	-0.3	19.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:08	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:55	4	X	-9999.	0.1	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:55	4	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:41	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:41	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	19:20	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	19:20	0	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	20:06	4	X	165.	0.8	19.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:06	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:54	4	X	165.	1.0	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:54	4	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	22:30	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	22:30	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/10/76	IN	23:12	4	X	-9999.	0.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	24:00	4	X	-9999.	0.9	19.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	24:00	0	X	-9999.	-9.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:50	4	X	160.	0.4	19.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:50	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:00	4	X	210.	0.0	19.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:00	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	17:55	4	X	-9999.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	17:55	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	18:40	4	X	-9999.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	18:40	0	X	-9999.	-9.9	29.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	IN	19:29	4	X	-9999.	-0.4	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	19:29	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/14/76	IN	20:17	4	X	-9999.	-0.4	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	20:17	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	21:09	4	X	210.	0.0	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	21:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	22:43	4	X	-9999.	0.5	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:43	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	IN	23:30	4	X	-9999.	0.7	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/14/76	DI	23:30	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	00:14	4	X	-9999.	0.8	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	00:14	0	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	01:01	4	X	190.	0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	01:01	0	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	16:58	4	X	200.	0.1	19.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	16:58	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	17:52	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	17:52	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	18:37	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	18:37	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/15/76	IN	19:26	4	X	-9999.	-0.3	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	19:26	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	20:16	4	X	-9999.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	20:16	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/15/76	IN	21:38	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	21:38	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	22:27	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	22:27	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	IN	23:13	4	X	190.	0.4	20.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/15/76	DI	23:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:02	4	X	-9999.	0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:02	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	00:47	4	X	180.	0.7	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	00:47	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	16:24	4	X	190.	0.6	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	16:24	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:11	4	X	-9999.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:03	4	X	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:03	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:02	4	X	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:02	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:50	4	X	-9999.	-0.1	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	19:50	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:42	4	X	190.	-0.3	20.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	20:42	0	X	-9999.	-9.9	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	21:29	4	X	-9999.	-0.2	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:29	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:05	4	X	-9999.	0.0	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:05	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:53	4	X	-9999.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:53	0	X	-9999.	-9.9	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	16:33	4	X	180.	0.6	20.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:33	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:19	4	X	-9999.	0.5	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:19	0	X	-9999.	-9.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:05	4	X	-9999.	0.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:05	0	X	-9999.	-9.9	22.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	18:49	4	X	-9999.	0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:35	4	X	-9999.	0.0	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:35	0	X	-9999.	-9.9	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	20:23	4	X	-9999.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:23	0	X	-9999.	-9.9	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:08	4	X	175.	-0.2	20.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:08	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:38	4	X	-9999.	-0.3	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:38	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:23	4	X	-9999.	-0.1	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:23	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	00:10	4	X	-9999.	0.1	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:10	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	00:55	4	X	170.	0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:55	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	16:40	4	X	140.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	17:27	4	X	151.	0.7	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	17:27	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	18:15	4	X	150.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	18:15	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:03	4	X	150.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:03	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	19:48	4	X	150.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	19:48	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/21/76	IN	20:30	4	X	150.	0.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	20:30	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	21:17	4	X	160.	0.5	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/21/76	DI	21:17	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:11	4	X	170.	0.3	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:11	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	IN	23:56	4	X	250.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/21/76	DI	23:56	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	00:41	4	X	350.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	00:41	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	16:37	4	X	-9999.	0.4	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	16:37	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	17:25	4	X	240.	0.5	22.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	17:25	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:10	4	X	-9999.	0.7	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:10	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	18:57	2	X	-9999.	0.7	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	18:57	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	19:44	2	X	-9999.	0.7	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	19:44	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	20:36	2	X	-9999.	0.7	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	20:36	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	21:23	2	X	260.	0.6	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	21:23	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	22:59	2	X	-9999.	0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	22:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	IN	23:46	2	X	-9999.	0.2	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/22/76	DI	23:46	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	00:37	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	00:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	01:19	2	X	260.	-0.1	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	01:19	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	16:12	2	X	-9999.	0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:12	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:59	2	X	450.	0.2	22.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:59	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:45	2	X	-9999.	0.5	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:28	2	X	-9999.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:28	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:15	2	X	400.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:15	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:01	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:01	0	X	-9999.	-9.9	33.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/23/76	IN	20:45	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:45	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:28	4	X	-9999.	0.8	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:28	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/23/76	IN	23:02	4	X	420.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:02	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:48	4	X	460.	0.4	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:48	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:31	4	X	600.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	01:09	4	X	750.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	01:09	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
06/24/76	IN	16:20	4	X	770.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:20	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:07	0	X	815.	0.0	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:52	4	X	-9999.	0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:52	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:38	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:38	0	X	-9999.	-9.9	33.8	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/24/76	IN	19:30	4	X	-9999.	0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:18	4	X	-9999.	0.8	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:18	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:04	4	X	790.	0.8	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:04	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	21:53	4	X	-9999.	0.8	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	21:55	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:30	4	X	-9999.	0.5	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:17	4	X	-9999.	0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:17	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	01:00	4	X	960.	0.2	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	01:00	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	16:30	4	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	16:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:24	4	X	2210.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:24	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:13	4	X	-9999.	-0.4	24.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:02	4	X	-9999.	-0.1	24.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/28/76	DI	19:02	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	19:55	4	X	-9999.	0.2	24.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/76	DI	19:55	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:46	4	X	-9999.	0.4	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	22:52	4	X	2170.	0.9	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	22:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:42	4	X	-9999.	1.0	24.5	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/28/76	DI	23:42	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:30	4	X	-9999.	0.9	24.0	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/29/76	DI	00:30	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/29/76	IN	01:11	4	X	2080.	0.8	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	01:11	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:55	4	X	1940.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:40	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:27	4	X	1800.	0.5	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:27	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:15	4	X	-9999.	0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:15	0	X	-9999.	-9.9	34.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	IN	22:58	4	X	-9999.	0.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:58	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	23:41	4	X	-9999.	1.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:41	0	X	2050.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	00:28	4	X	-9999.	1.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:28	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	01:10	4	X	1940.	1.0	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	01:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:13	4	X	1670.	0.2	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:13	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:17	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:07	4	X	1500.	0.5	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:07	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:54	4	X	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:54	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:40	4	X	-9999.	0.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:40	4	X	1570.	1.1	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	17:32	4	X	1360.	0.3	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	17:32	0	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/01/76	IN	18:17	4	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	18:17	0	X	-9999.	-9.9	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	19:08	4	X	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:08	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:55	4	X	-9999.	0.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	19:55	0	X	-9999.	-9.9	24.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	20:45	4	X	1100.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:45	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:33	4	X	-9999.	0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:33	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:07	4	X	-9999.	0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:07	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:52	4	X	-9999.	0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:52	0	X	-9999.	-9.9	24.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/02/76	IN	00:36	4	X	-9999.	0.8	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	00:36	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	IN	01:19	4	X	990.	0.9	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	01:19	0	X	-9999.	-9.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	16:31	4	X	210.	0.6	26.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	16:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:12	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:12	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	17:54	4	X	-9999.	0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	18:35	4	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	18:35	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:15	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:15	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	19:57	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	19:57	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	20:38	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	20:38	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/06/76	IN	21:19	4	X	-9999.	0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	21:19	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/06/76	IN	22:48	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	22:48	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	IN	23:31	4	X	210.	0.2	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/06/76	DI	23:31	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	00:12	4	X	-9999.	-0.1	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:12	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	00:51	4	X	210.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	00:51	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	IN	16:52	5	X	180.	0.5	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	16:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	17:32	5	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	17:32	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:13	5	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:13	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	18:52	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	18:52	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	19:31	5	X	-9999.	1.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	19:31	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:10	5	X	-9999.	1.0	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	20:10	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	IN	20:49	5	X	-9999.	0.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/07/76	DI	20:49	0	X	-9999.	-9.9	34.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/76	IN	21:29	5	X	270.	0.8	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	21:29	0	X	-9999.	-9.9	34.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/07/76	IN	22:45	5	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	22:45	0	X	-9999.	-9.9	34.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/07/76	IN	23:24	5	X	-9999.	0.4	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/07/76	DI	23:24	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	00:04	5	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:04	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/08/76	IN	00:40	5	X	1040.	0.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:14	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:14	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	5	0	1	1	5	0	6	0	6	0	6	0	6	0	6	0	6
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:25	4	X	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	23:25	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	16:34	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:34	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	2	0	1	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:47	4	X	250.	0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

B TRANSIENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/03/76	IN	00:40	5	X	1040.	0.1	23.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	00:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	16:32	4	X	195.	0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	16:32	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:11	4	X	190.	0.3	25.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:11	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	17:51	4	X	-9999.	0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	17:51	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	18:29	4	X	-9999.	0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	18:29	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:08	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:08	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	19:47	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	19:47	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	20:23	4	X	-9999.	1.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	20:23	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	21:11	4	X	110.	1.0	24.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	21:11	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	22:48	4	X	-9999.	0.8	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/08/76	DI	22:48	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	IN	23:29	4	X	-9999.	0.5	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/08/76	DI	23:29	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:13	4	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:13	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	IN	00:50	4	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/09/76	DI	00:50	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	16:36	4	X	255.	0.0	25.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	16:36	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:15	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	17:56	4	X	-9999.	-0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	17:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/12/76	IN	18:41	4	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	18:41	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	19:23	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	19:23	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	20:06	4	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	20:06	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	21:53	4	X	250.	0.7	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	21:53	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	IN	22:36	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	22:36	0	X	-9999.	-9.9	30.3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/12/76	IN	23:19	4	X	-9999.	0.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/12/76	DI	23:19	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	00:03	4	X	-9999.	1.0	26.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	00:03	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	IN	00:47	4	X	250.	0.9	24.9	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	16:38	4	X	250.	0.0	24.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	16:38	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:18	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	17:55	4	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	17:55	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	18:37	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	18:37	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	19:18	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	19:18	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	20:57	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	20:57	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	21:34	4	X	-9999.	0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	21:34	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	22:12	4	X	233.	0.6	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:12	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/13/76	IN	22:52	4	X	-9999.	0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	DI	22:52	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/13/76	IN	23:31	4	X	-9999.	0.9	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/13/76	DI	23:31	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:09	4	X	-9999.	1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	00:09	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	00:47	4	X	240.	1.1	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	00:47	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	16:28	4	X	240.	0.3	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	16:28	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:09	4	X	-9999.	0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:09	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:54	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:54	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:34	4	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:34	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:13	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:13	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:56	4	X	-9999.	-0.2	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:56	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:31	4	X	220.	0.2	24.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:31	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:09	4	X	-9999.	0.4	25.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	22:09	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:51	4	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:51	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:35	4	X	-9999.	0.7	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	23:35	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:14	4	X	-9999.	0.8	25.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	00:14	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:59	4	X	230.	0.9	24.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:59	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

D- TRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	16:36	4	X	230.	0.5	25.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	16:36	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:15	4	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:15	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:01	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:01	0	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:40	4	X	-9999.	0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:18	4	X	-9999.	0.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:18	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:58	4	X	-9999.	-0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:58	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:35	4	X	190.	0.0	25.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:35	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:13	4	X	-9999.	0.2	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:13	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:51	4	X	-9999.	0.4	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:30	4	X	-9999.	0.8	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/15/76	DI	23:30	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:12	4	X	-9999.	0.8	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:12	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:50	4	X	185.	0.8	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:50	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	16:55	4	X	-9999.	-0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	16:55	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:46	4	X	-9999.	-0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:46	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:30	4	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:30	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:16	4	X	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:16	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

1.3 LOVETT GENERATING STATION ENTRAINMENT SURVIVAL RAW DATA SUMMARIES, 1976

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/01/76	IN	21:34	0	X	130.	-0.6	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/76	DI	21:34	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/76	IN	23:10	0	X	130.	-0.2	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/76	DI	23:10	0	X	-9999.	-9.9	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	00:35	0	X	130.	0.2	15.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	00:35	0	X	-9999.	-9.9	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	19:09	0	X	139.	-0.5	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	19:09	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	20:20	0	X	139.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	20:20	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	21:15	0	X	139.	-0.7	16.5	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/02/76	DI	21:15	0	X	-9999.	-9.9	17.0	0	1	1	1	1	1	1	1	1	0	2	0	2	0	2	0	2
06/02/76	IN	22:55	0	X	137.	-0.3	15.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/02/76	DI	22:55	0	X	-9999.	-9.9	14.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	23:48	0	X	140.	-9.9	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	DI	23:48	0	X	-9999.	-9.9	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	18:37	0	X	-9999.	-0.5	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	18:37	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	19:39	0	X	-9999.	-0.6	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	19:39	0	X	-9999.	-9.9	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	20:16	0	X	-9999.	-0.7	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	20:16	0	X	-9999.	-9.9	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	20:59	0	X	-9999.	-0.8	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	20:59	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	22:12	0	X	-9999.	-0.8	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	22:12	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	22:55	0	X	-9999.	-0.7	16.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	22:55	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	23:39	0	X	-9999.	-0.5	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	23:39	0	X	-9999.	-9.9	17.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/04/76	IN	00:23	0	X	-9999.	-0.3	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/04/76	DI	00:23	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	13:40	2	X	135.	-0.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	13:40	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	14:38	2	X	130.	-1.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	14:38	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	15:25	2	X	130.	-0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	15:25	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	16:20	2	X	130.	-1.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	16:20	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	17:16	2	X	125.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:16	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:53	2	X	120.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:53	0	X	-9999.	-9.9	23.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	19:35	2	X	120.	0.3	17.0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/09/76	DI	19:35	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:19	2	X	120.	-0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:19	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:03	2	X	120.	0.5	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:03	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:10	2	X	132.	-1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:10	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:00	2	X	13000.	-0.6	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:00	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:50	2	X	130.	-0.3	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:50	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:25	2	X	130.	0.1	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:25	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:09	2	X	130.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:09	0	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:55	2	X	132.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:55	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	23:19	2	X	131.	0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:19	0	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/76	IN	00:03	2	X	132.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:03	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:45	2	X	133.	-0.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:45	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:12	2	X	150.	-0.3	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	17:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:02	2	X	150.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:02	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:53	2	X	145.	-0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:53	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	19:39	2	X	150.	-0.8	22.0	1	1	1	1	2	1	2	1	2	1	2	0	3	0	3	0	3
06/16/76	DI	19:39	0	X	-9999.	-9.9	30.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	20:24	2	X	160.	-0.8	21.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	DI	20:24	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	21:11	2	X	145.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	22:36	2	X	140.	-0.7	20.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/16/76	DI	22:36	0	X	-9999.	-9.9	29.0	1	0	2	1	2	1	2	1	2	1	2	0	3	0	3	0	3
06/16/76	IN	23:40	1	X	130.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	00:21	1	X	130.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:21	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	16:48	2	X	150.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:48	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:29	2	X	160.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:29	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:09	2	X	170.	-0.4	21.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/17/76	DI	18:09	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:49	2	X	170.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	28.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	19:27	2	X	150.	-0.7	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:27	0	X	-9999.	-9.9	27.0	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	20:09	2	X	180.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:09	0	X	-9999.	-9.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	20:50	2	X	-9999.	-0.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	20:50	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:59	2	X	190.	-1.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:59	0	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	22:40	2	X	185.	-0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:40	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:22	2	X	145.	-0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:22	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:59	1	X	140.	-0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:59	0	X	-9999.	-9.9	26.0	1	0	1	1	1	1	1	1	1	1	1	0	2	0	2	0	2
06/18/76	IN	00:40	1	X	130.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:40	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:35	2	X	-9999.	-0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:35	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:28	2	X	-9999.	-0.4	22.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:28	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:14	2	X	150.	-0.2	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:14	0	X	-9999.	-9.9	31.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	19:00	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:00	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	19:42	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	20:26	2	X	-9999.	0.1	22.5	2	0	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/23/76	DI	20:26	0	X	-9999.	-9.9	31.5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/23/76	IN	21:10	2	X	220.	0.2	22.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:10	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	22:27	2	X	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:27	0	X	-9999.	-9.9	29.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	IN	23:08	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:08	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	23:55	1	X	-9999.	-0.4	23.0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/23/76	DI	23:55	0	X	-9999.	-9.9	28.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	IN	00:35	1	X	260.	-0.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:35	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	16:28	2	X	162.	-0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:28	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:10	2	X	-9999.	-0.7	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:53	2	X	-9999.	-0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:53	0	X	-9999.	-9.9	31.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	IN	18:36	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:36	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:16	2	X	-9999.	-0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:16	0	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	20:04	2	X	410.	0.0	22.5	1	1	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	20:04	0	X	-9999.	-9.9	29.5	1	0	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/24/76	IN	20:45	2	X	-9999.	0.1	22.5	0	3	2	1	4	1	4	1	4	1	4	1	4	1	4	1	4
06/24/76	DI	20:45	0	X	-9999.	-9.9	29.0	0	1	2	1	2	0	3	0	3	0	3	0	3	0	3	0	3
06/24/76	IN	22:11	2	X	-9999.	0.1	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:53	1	X	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:53	0	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	IN	23:35	1	X	-9999.	-0.1	23.0	0	2	3	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/24/76	DI	23:35	0	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/25/76	IN	00:18	1	X	-9999.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:18	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:59	1	X	600.	-0.4	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	DI	00:59	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:34	2	X	1000.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:34	0	X	950.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:33	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:33	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/28/76	IN	19:23	2	X	-9999.	-0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:23	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:02	2	X	-9999.	-0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:02	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:51	2	X	1000.	-0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:33	2	X	-9999.	0.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:33	0	X	-9999.	-9.9	32.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/76	IN	23:25	2	X	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:25	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:08	2	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	00:08	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	00:43	1	X	1050.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	00:43	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	18:23	2	X	670.	-0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:23	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	19:15	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:15	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	20:00	2	X	-9999.	-1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:00	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:47	2	X	-9999.	-0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:47	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:29	2	X	390.	-0.3	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:29	0	X	-9999.	-9.9	31.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:11	2	X	-9999.	0.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	IN	22:54	1	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:54	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:35	1	X	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	23:35	0	X	-9999.	-9.9	29.5	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/30/76	IN	00:22	1	X	760.	0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	00:22	0	X	-9999.	-9.9	29.5	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	0	3

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	IN	16:40	2	X	1200.	-0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	17:44	2	X	-9999.	-0.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:44	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:33	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:33	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:18	2	X	-9999.	-0.7	25.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	20:18	0	X	-9999.	-9.9	32.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	21:03	2	X	-9999.	-0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:03	0	X	-9999.	-9.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	IN	22:02	2	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:02	0	X	-9999.	-9.9	32.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/30/76	IN	22:53	2	X	-9999.	0.0	24.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	22:53	0	X	-9999.	-9.9	31.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
06/30/76	IN	23:40	1	X	-9999.	0.3	24.0	2	0	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1
06/30/76	DI	23:40	0	X	-9999.	-9.9	30.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	IN	00:25	1	X	-9999.	0.4	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
07/01/76	DI	00:25	0	X	-9999.	-9.9	30.0	3	0	0	3	0	3	0	3	0	2	1	2	1	2	1	2	1
07/01/76	IN	19:29	2	X	290.	-0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:29	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:21	2	X	-9999.	-0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:21	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:05	2	X	-9999.	-0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:05	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:49	2	X	-9999.	-0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:49	0	X	-9999.	-9.9	33.0	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	22:32	2	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:32	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:22	1	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:22	0	X	-9999.	-9.9	30.0	1	0	4	1	4	1	4	1	4	1	4	0	5	0	5	0	5
07/01/76	IN	23:59	1	X	-9999.	0.0	24.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	23:59	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	IN	00:42	1	X	205.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	00:42	0	X	-9999.	-9.9	31.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	17:23	2	X	-9999.	-0.6	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:23	2	X	-9999.	-0.6	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:14	2	X	200.	-0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:14	0	X	-9999.	-0.7	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	18:58	1	X	-9999.	-0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:58	0	X	-9999.	-0.8	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	19:46	1	X	-9999.	-0.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:46	1	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:56	1	X	-9999.	-0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:56	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:37	1	X	-9999.	-0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:37	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:16	1	X	200.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:16	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:59	1	X	-9999.	-0.2	25.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	DI	22:59	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:42	1	X	-9999.	0.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:25	1	X	200.	0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:25	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:08	2	X	-9999.	-0.4	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:08	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:00	1	X	-9999.	-0.6	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:00	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:41	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:41	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:24	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:24	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:05	1	X	-9999.	-0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:05	0	X	-9999.	-9.9	35.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-WHITE PERCH- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	20:46	1	X	-9999.	-0.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:46	0	X	-9999.	-9.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	21:52	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:52	0	X	-9999.	-9.9	36.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	22:34	1	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:34	0	X	-9999.	-9.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
07/15/76	IN	23:16	1	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:16	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:57	1	X	-9999.	-0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:57	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:38	1	X	-9999.	0.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:38	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	17:35	2	X	5470.	-1.0	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:35	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:24	2	X	-9999.	-0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	18:24	0	X	-9999.	-9.9	33.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	19:02	2	X	-9999.	-0.6	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	19:02	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	20:20	2	X	-9999.	-0.1	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	20:20	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:10	2	X	-9999.	0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	21:48	2	X	-9999.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	21:48	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	23:20	1	X	7250.	0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/76	DI	23:20	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	IN	00:02	1	X	-9999.	0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/27/76	DI	00:02	0	X	-9999.	-9.9	30.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	17:39	2	X	-9999.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	17:39	0	X	-9999.	-9.9	37.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	18:56	2	X	-9999.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	18:56	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	13:40	2	X	135.	-0.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	13:40	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	14:38	2	X	130.	-1.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	14:38	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	15:25	2	X	130.	-0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	15:25	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	16:20	2	X	130.	-1.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	16:20	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	17:16	2	X	125.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:16	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:53	2	X	120.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:53	0	X	-9999.	-9.9	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	19:35	2	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:35	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:19	2	X	120.	-0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:19	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:03	2	X	120.	0.5	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:03	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:10	2	X	132.	-1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:10	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:00	2	X	13000.	-0.6	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:00	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:50	2	X	130.	-0.3	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:50	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:25	2	X	130.	0.1	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:25	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:09	2	X	130.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:09	0	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:55	2	X	132.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:55	0	X	-9999.	-9.9	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	IN	23:19	2	X	131.	0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:19	0	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/76	IN	00:03	2	X	132.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:03	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:45	2	X	133.	-0.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:45	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:12	2	X	150.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:02	2	X	150.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:02	0	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	18:53	2	X	145.	-0.6	21.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	18:53	0	X	-9999.	-9.9	29.0	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/16/76	IN	19:39	2	X	150.	-0.8	22.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/16/76	DI	19:39	0	X	-9999.	-9.9	30.5	0	3	4	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/16/76	IN	20:24	2	X	160.	-0.8	21.5	1	1	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/16/76	DI	20:24	0	X	-9999.	-9.9	30.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/76	IN	21:11	2	X	145.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	22:36	2	X	140.	-0.7	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	22:36	0	X	-9999.	-9.9	29.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/16/76	IN	23:40	1	X	130.	-0.4	20.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	00:21	1	X	130.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:21	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	16:48	2	X	150.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:48	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:29	2	X	160.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:29	0	X	-9999.	-9.9	28.0	0	3	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/17/76	IN	18:09	2	X	170.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:09	0	X	-9999.	-9.9	28.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/76	IN	18:49	2	X	170.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:27	2	X	150.	-0.7	21.5	5	0	2	5	2	5	2	5	2	5	2	4	3	1	6	0	7
06/17/76	DI	19:27	0	X	-9999.	-9.9	27.0	3	0	2	0	5	0	5	0	5	0	5	0	5	0	5	0	5

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	20:09	2	X	180.	-0.8	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	20:09	0	X	-9999.	-9.9	27.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	20:50	2	X	-9999.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:50	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:59	2	X	190.	-1.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:59	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:40	2	X	185.	-0.9	21.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	2
06/17/76	DI	22:40	0	X	-9999.	-9.9	25.5	2	1	4	3	4	2	5	2	5	0	7	0	7	0	7	0	7
06/17/76	IN	23:22	2	X	145.	-0.8	19.0	6	0	3	3	6	3	6	3	6	3	6	2	7	2	7	1	8
06/17/76	DI	23:22	0	X	-9999.	-9.9	28.0	2	0	2	2	2	2	2	1	3	1	3	1	3	1	3	1	3
06/17/76	IN	23:59	1	X	140.	-0.6	20.0	5	0	0	5	0	5	0	4	1	4	1	4	1	4	1	4	1
06/17/76	DI	23:59	0	X	-9999.	-9.9	26.0	9	4	4	10	7	10	7	8	9	7	10	6	11	6	11	6	11
06/18/76	IN	00:40	1	X	130.	0.4	20.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/18/76	DI	00:40	0	X	-9999.	-9.9	25.0	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/23/76	IN	16:35	2	X	-9999.	-0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:35	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:28	2	X	-9999.	-0.4	22.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:28	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:14	2	X	150.	-0.2	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:14	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:00	2	X	-9999.	-0.1	22.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/23/76	DI	19:00	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	19:42	2	X	-9999.	-0.1	22.0	4	0	0	4	0	3	1	3	1	3	1	3	1	3	1	2	2
06/23/76	DI	19:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:26	2	X	-9999.	0.1	22.5	2	0	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	DI	20:26	0	X	-9999.	-9.9	31.5	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/23/76	IN	21:10	2	X	220.	0.2	22.7	2	1	0	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/23/76	DI	21:10	0	X	-9999.	-9.9	31.0	2	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
06/23/76	IN	22:27	2	X	-9999.	0.0	23.0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/23/76	DI	22:27	0	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	23:08	2	X	-9999.	-0.3	22.5	2	2	1	4	1	3	2	3	2	3	2	2	3	2	3	2	3
06/23/76	DI	23:08	0	X	-9999.	-9.9	27.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	23:55	1	X	-9999.	-0.4	23.0	6	1	1	7	1	6	2	6	2	5	3	5	3	5	3	5	3
06/23/76	DI	23:55	0	X	-9999.	-9.9	28.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/24/76	IN	00:35	1	X	260.	-0.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:35	0	X	-9999.	-9.9	30.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	16:28	2	X	162.	-0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:28	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:10	2	X	-9999.	-0.7	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:53	2	X	-9999.	-0.5	22.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	17:53	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:36	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:36	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:16	2	X	-9999.	-0.1	22.5	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	19:16	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:04	2	X	410.	0.0	22.5	1	1	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1
06/24/76	DI	20:04	0	X	-9999.	-9.9	29.5	2	0	2	1	3	1	3	1	3	1	3	1	3	1	3	1	3
06/24/76	IN	20:45	2	X	-9999.	0.1	22.5	3	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
06/24/76	DI	20:45	0	X	-9999.	-9.9	29.0	2	0	7	2	7	1	8	1	8	1	8	1	8	1	8	1	8
06/24/76	IN	22:11	2	X	-9999.	0.1	23.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	22:11	0	X	-9999.	-9.9	30.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	IN	22:53	1	X	-9999.	-0.1	23.0	2	0	0	2	0	0	2	0	2	0	2	0	2	0	2	0	2
06/24/76	DI	22:53	0	X	-9999.	-9.9	29.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/24/76	IN	23:35	1	X	-9999.	-0.1	23.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	DI	23:35	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:18	1	X	-9999.	-0.3	23.5	1	1	1	1	2	1	2	1	2	1	2	0	3	0	3	0	3
06/25/76	DI	00:18	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/25/76	IN	00:59	1	X	600.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:59	0	X	-9999.	-9.9	29.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/28/76	IN	17:34	2	X	1000.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:34	0	X	950.	-9.9	33.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/28/76	IN	18:33	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:33	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)
ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/28/76	IN	19:23	2	X	-9999.	-0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:23	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	20:02	2	X	-9999.	-0.6	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	20:02	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:51	2	X	1000.	-0.2	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	20:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:33	2	X	-9999.	0.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:33	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	23:25	2	X	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	23:25	0	X	-9999.	-9.9	30.0	1	0	1	1	1	1	1	1	1	1	1	0	2	0	2	0	2
06/29/76	IN	00:08	2	X	-9999.	0.2	24.0	1	1	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	00:08	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	00:43	1	X	1050.	-0.2	24.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	DI	00:43	0	X	-9999.	-9.9	33.0	1	1	0	2	0	1	1	1	1	1	1	1	1	1	1	1	1
06/29/76	IN	18:23	2	X	670.	-0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:23	0	X	-9999.	-9.9	33.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/29/76	IN	19:15	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:15	0	X	-9999.	-9.9	31.0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/29/76	IN	20:00	2	X	-9999.	-1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:00	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:47	2	X	-9999.	-0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:47	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	21:29	2	X	390.	-0.3	23.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	21:29	0	X	-9999.	-9.9	31.5	4	0	1	4	1	4	1	4	1	4	1	4	1	4	1	2	3
06/29/76	IN	22:11	2	X	-9999.	0.0	24.0	5	1	1	5	2	5	2	4	3	4	3	4	3	2	5	2	5
06/29/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:54	1	X	-9999.	0.2	24.0	4	0	0	4	0	3	1	2	2	2	2	2	2	1	3	1	3
06/29/76	DI	22:54	0	X	-9999.	-9.9	30.0	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	0	3
06/29/76	IN	23:35	1	X	-9999.	0.3	24.0	3	0	1	3	1	2	2	1	3	1	3	1	3	1	3	1	3
06/29/76	DI	23:35	0	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	00:22	1	X	760.	0.3	23.5	4	0	2	4	2	4	2	4	2	4	2	4	2	4	2	4	2
06/30/76	DI	00:22	0	X	-9999.	-9.9	29.5	4	3	2	4	5	4	5	2	7	2	7	2	7	1	8	0	9

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	IN	16:40	2	X	1200.	-0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:44	2	X	-9999.	-0.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:44	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:33	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:33	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:18	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:03	2	X	-9999.	-0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:03	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:02	2	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:02	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:53	2	X	-9999.	0.0	24.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	22:53	0	X	-9999.	-9.9	31.0	1	0	1	1	1	1	1	1	1	0	2	0	2	0	2	0	2
06/30/76	IN	23:40	1	X	-9999.	0.3	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	23:40	0	X	-9999.	-9.9	30.5	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
07/01/76	IN	00:25	1	X	-9999.	0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:25	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:29	2	X	290.	-0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:29	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:21	2	X	-9999.	-0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:21	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:05	2	X	-9999.	-0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:05	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	21:49	2	X	-9999.	-0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:49	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	22:32	2	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:32	0	X	-9999.	-9.9	32.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	23:22	1	X	-9999.	-0.1	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	23:22	0	X	-9999.	-9.9	30.0	2	1	4	2	5	2	5	2	5	2	5	0	7	0	7	0	7
07/01/76	IN	23:59	1	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:59	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	13:40	2	X	135.	-0.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	13:40	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	14:38	2	X	130.	-1.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	14:38	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	15:25	2	X	130.	-0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	15:25	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	16:20	2	X	130.	-1.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	16:20	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	17:16	2	X	125.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:16	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:53	2	X	120.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:53	0	X	-9999.	-9.9	23.5	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/09/76	IN	19:35	2	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:35	0	X	-9999.	-9.9	20.0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/09/76	IN	20:19	2	X	120.	-0.3	17.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/09/76	DI	20:19	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:03	2	X	120.	0.5	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:03	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:10	2	X	132.	-1.0	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	17:10	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:00	2	X	13000.	-0.6	18.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	DI	18:00	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:50	2	X	130.	-0.3	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:50	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:25	2	X	130.	0.1	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:25	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:09	2	X	130.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:09	0	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:55	2	X	132.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:55	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	23:19	2	X	131.	0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:19	0	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/76	IN	00:03	2	X	132.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:03	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	IN	00:45	2	X	133.	-0.2	18.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:45	0	X	-9999.	-9.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	17:12	2	X	150.	-0.3	21.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	17:12	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:02	2	X	150.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:02	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:53	2	X	145.	-0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:53	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	19:39	2	X	150.	-0.8	22.0	2	0	0	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/16/76	DI	19:39	0	X	-9999.	-9.9	30.5	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	20:24	2	X	160.	-0.8	21.5	2	1	0	3	0	1	2	1	2	1	2	0	3	0	3	0	3
06/16/76	DI	20:24	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	21:11	2	X	145.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	21:11	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	22:36	2	X	140.	-0.7	20.5	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	22:36	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	23:40	1	X	130.	-0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	00:21	1	X	130.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:21	0	X	-9999.	-9.9	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	16:48	2	X	150.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:48	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:29	2	X	160.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:29	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:09	2	X	170.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:09	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:49	2	X	170.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:27	2	X	150.	-0.7	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	19:27	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

DATE	ST	TIME	P	M	COND. (U'MHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	20:09	2	X	180.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:09	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	20:50	2	X	-9999.	-0.9	27.0	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/17/76	DI	20:50	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:59	2	X	190.	-1.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:59	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:40	2	X	185.	-0.9	21.0	1	1	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/76	DI	22:40	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:22	2	X	145.	-0.8	19.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	23:22	0	X	-9999.	-9.9	28.0	0	5	0	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/17/76	IN	23:59	1	X	140.	-0.6	20.0	2	5	1	2	6	2	6	2	6	2	6	0	8	0	8	0	8
06/17/76	DI	23:59	0	X	-9999.	-9.9	26.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/76	IN	00:40	1	X	130.	0.4	20.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/18/76	DI	00:40	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:35	2	X	-9999.	-0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:35	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:28	2	X	-9999.	-0.4	22.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:28	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:14	2	X	150.	-0.2	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:14	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:00	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:00	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:26	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:26	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:10	2	X	220.	0.2	22.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:10	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	22:27	2	X	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:27	0	X	-9999.	-9.9	29.5	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
06/23/76	IN	23:08	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:08	0	X	-9999.	-9.9	27.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-STRIPED BASS- YOLK SAC L

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	23:55	1	X	-9999.	-0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:55	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:35	1	X	260.	-0.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:35	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	16:28	2	X	162.	-0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:28	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:10	2	X	-9999.	-0.7	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:10	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	17:53	2	X	-9999.	-0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:53	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:36	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:36	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:16	2	X	-9999.	-0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:16	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	20:04	2	X	410.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:04	0	X	-9999.	-9.9	29.5	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	IN	20:45	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:45	0	X	-9999.	-9.9	29.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	22:11	2	X	-9999.	0.1	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	22:53	1	X	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	22:53	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:35	1	X	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:35	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:18	1	X	-9999.	-0.3	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:18	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	IN	00:59	1	X	600.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/25/76	DI	00:59	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	17:34	2	X	1000.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:34	0	X	950.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	18:33	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:33	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/02/76	IN	00:42	1	X	205.	0.2	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/02/76	DI	00:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	17:23	2	X	-9999.	-0.6	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	17:23	2	X	-9999.	-0.6	35.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/14/76	IN	18:14	2	X	200.	-0.7	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:14	0	X	-9999.	-0.7	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	18:58	1	X	-9999.	-0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	18:58	0	X	-9999.	-0.8	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	19:46	1	X	-9999.	-0.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	19:46	1	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	20:56	1	X	-9999.	-0.7	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	20:56	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	21:37	1	X	-9999.	-0.6	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	21:37	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	22:16	1	X	200.	-0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:16	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/14/76	IN	22:59	1	X	-9999.	-0.2	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	22:59	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	IN	23:42	1	X	-9999.	0.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/76	DI	23:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	00:25	1	X	200.	0.1	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	00:25	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	17:08	2	X	-9999.	-0.4	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	17:08	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:00	1	X	-9999.	-0.6	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:00	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	18:41	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	18:41	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	19:24	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	19:24	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	20:05	1	X	-9999.	-0.8	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:05	0	X	-9999.	-9.9	35.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/15/76	IN	20:46	1	X	-9999.	-0.9	26.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	20:46	0	X	-9999.	-9.9	36.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	IN	21:52	1	X	-9999.	-0.7	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	21:52	0	X	-9999.	-9.9	36.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/15/76	IN	22:34	1	X	-9999.	-0.5	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	22:34	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:16	1	X	-9999.	-0.3	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:16	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	IN	23:57	1	X	-9999.	-0.1	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/15/76	DI	23:57	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	IN	00:38	1	X	-9999.	0.0	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/16/76	DI	00:38	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/26/76	IN	17:35	2	X	5470.	-1.0	25.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	DI	17:35	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/26/76	IN	18:24	2	X	-9999.	-0.9	25.5	0	0	83	0	83	0	83	0	83	0	83	0	83	0	83	0	83
07/26/76	DI	18:24	0	X	-9999.	-9.9	33.4	0	0	136	0	136	0	136	0	136	0	136	0	136	0	136	0	136
07/26/76	IN	19:02	2	X	-9999.	-0.6	25.5	0	0	52	0	52	0	52	0	52	0	52	0	52	0	52	0	52
07/26/76	DI	19:02	0	X	-9999.	-9.9	30.0	0	0	254	0	254	0	254	0	254	0	254	0	254	0	254	0	254
07/26/76	IN	20:20	2	X	-9999.	-0.1	25.0	0	0	70	0	70	0	70	0	70	0	70	0	70	0	70	0	70
07/26/76	DI	20:20	0	X	-9999.	-9.9	32.5	0	0	79	0	79	0	79	0	79	0	79	0	79	0	79	0	79
07/26/76	IN	21:10	2	X	-9999.	0.5	25.0	0	0	91	0	91	0	91	0	91	0	91	0	91	0	91	0	91
07/26/76	DI	21:10	0	X	-9999.	-9.9	32.0	0	0	110	0	110	0	110	0	110	0	110	0	110	0	110	0	110
07/26/76	IN	21:48	2	X	-9999.	0.3	24.5	0	0	130	0	130	0	130	0	130	0	130	0	130	0	130	0	130
07/26/76	DI	21:48	0	X	-9999.	-9.9	32.5	0	0	85	0	85	0	85	0	85	0	85	0	85	0	85	0	85
07/26/76	IN	23:20	1	X	7250.	0.3	24.5	0	0	24	0	24	0	24	0	24	0	24	0	24	0	24	0	24
07/26/76	DI	23:20	0	X	-9999.	-9.9	30.5	0	0	101	0	101	0	101	0	101	0	101	0	101	0	101	0	101
07/27/76	IN	00:02	1	X	-9999.	0.2	25.5	0	0	57	0	57	0	57	0	57	0	57	0	57	0	57	0	57
07/27/76	DI	00:02	0	X	-9999.	-9.9	30.2	0	0	67	0	67	0	67	0	67	0	67	0	67	0	67	0	67
07/28/76	IN	17:39	2	X	-9999.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	17:39	0	X	-9999.	-9.9	37.0	0	0	14	0	14	0	14	0	14	0	14	0	14	0	14	0	14
07/28/76	IN	18:56	2	X	-9999.	-0.9	27.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	DI	18:56	0	X	-9999.	-9.9	35.0	0	0	83	0	83	0	83	0	83	0	83	0	83	0	83	0	83

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	IN	19:28	2	X	-9999.	-0.9	25.5	0	3	39	0	42	0	42	0	42	0	42	0	42	0	42	0	42
07/28/76	DI	19:28	0	X	-9999.	-9.9	34.5	0	0	152	0	152	0	152	0	152	0	152	0	152	0	152	0	152
07/28/76	IN	20:17	2	X	-9999.	-0.7	25.5	0	1	66	0	67	0	67	0	67	0	67	0	67	0	67	0	67
07/28/76	DI	20:17	0	X	-9999.	-9.9	32.5	0	0	134	0	134	0	134	0	134	0	134	0	134	0	134	0	134
07/28/76	IN	21:11	2	X	-9999.	-0.3	25.5	0	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
07/28/76	DI	21:11	0	X	-9999.	-9.9	35.0	0	0	56	0	56	0	56	0	56	0	56	0	56	0	56	0	56
07/28/76	IN	22:58	2	X	-9999.	0.0	25.5	0	0	149	0	149	0	149	0	149	0	149	0	149	0	149	0	149
07/28/76	DI	22:58	0	X	-9999.	-9.9	31.5	0	0	165	0	165	0	165	0	165	0	165	0	165	0	165	0	165
07/28/76	IN	23:43	2	X	-9999.	0.3	25.5	0	1	131	0	132	0	132	0	132	0	132	0	132	0	132	0	132
07/28/76	DI	23:43	0	X	-9999.	-9.9	30.5	1	0	196	0	197	0	197	0	197	0	197	0	197	0	197	0	197
07/29/76	IN	00:24	1	X	-9999.	0.3	25.0	0	1	119	0	120	0	120	0	120	0	120	0	120	0	120	0	120
07/29/76	DI	00:24	0	X	-9999.	-9.9	32.0	0	1	120	0	121	0	121	0	121	0	121	0	121	0	121	0	121

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- YOLK SAC LA

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	IN	19:28	2	X	-9999.	-0.9	25.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
07/28/76	DI	19:28	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:17	2	X	-9999.	-0.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:17	0	X	-9999.	-9.9	32.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/28/76	IN	21:11	2	X	-9999.	-0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:11	0	X	-9999.	-9.9	35.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/28/76	IN	22:58	2	X	-9999.	0.0	25.5	1	0	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
07/28/76	DI	22:58	0	X	-9999.	-9.9	31.5	0	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15
07/28/76	IN	23:43	2	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:43	0	X	-9999.	-9.9	30.5	0	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8
07/29/76	IN	00:24	1	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:24	0	X	-9999.	-9.9	32.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)
ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-BAY ANCHOVY- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
07/28/76	IN	19:28	2	X	-9999.	-0.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	19:28	0	X	-9999.	-9.9	34.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	20:17	2	X	-9999.	-0.7	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	20:17	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	21:11	2	X	-9999.	-0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	21:11	0	X	-9999.	-9.9	35.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	IN	22:58	2	X	-9999.	0.0	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	22:58	0	X	-9999.	-9.9	31.5	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
07/28/76	IN	23:43	2	X	-9999.	0.3	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/28/76	DI	23:43	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	IN	00:24	1	X	-9999.	0.3	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/76	DI	00:24	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/18/76	IN	18:00	2	X	-9999.	-1.2	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	18:00	2	X	-9999.	-1.2	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	18:45	2	X	-9999.	-1.2	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	18:40	2	X	-9999.	-1.2	13.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	19:28	2	X	120.	-1.2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	19:30	2	X	150.	-1.2	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	20:25	2	X	110.	-1.1	4.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	DI	20:22	2	X	140.	-1.1	11.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/18/76	IN	21:15	2	X	110.	-0.6	4.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	21:16	2	X	140.	-0.6	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	22:05	2	X	120.	-0.5	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	22:02	2	X	140.	-0.5	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	22:53	2	X	120.	-0.3	5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	22:45	2	X	145.	-0.3	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	23:50	2	X	125.	-0.2	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	23:50	2	X	145.	-0.2	11.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/22/76	IN	18:09	2	X	110.	-0.6	4.5	4	4	0	8	0	8	0	8	0	6	2	6	2	6	2	5	3		
03/22/76	DI	18:15	2	X	135.	-0.6	11.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	IN	19:13	2	X	110.	-0.7	4.5	1	0	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1		
03/22/76	DI	19:10	2	X	135.	-0.7	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	IN	20:09	2	X	120.	-0.9	6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	DI	20:13	2	X	145.	-0.9	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	IN	21:19	2	X	120.	-1.0	6.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	DI	21:20	2	X	140.	-1.0	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	IN	22:31	2	X	115.	-1.0	7.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	DI	22:36	2	X	130.	-1.0	13.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2		
03/22/76	IN	23:31	2	X	-9999.	-0.9	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	DI	23:37	2	X	125.	-0.9	10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/23/76	IN	00:31	1	X	110.	-0.7	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/23/76	DI	00:35	1	X	130.	-0.7	11.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	IN	00:35	1	X	130.	-0.2	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	DI	00:35	1	X	130.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-ATLANTIC TOMCOD- YOLK SA

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
03/18/76	IN	18:00	2	X	-9999.	-1.2	5.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	DI	18:00	2	X	-9999.	-1.2	12.5	1	0	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/18/76	IN	18:45	2	X	-9999.	-1.2	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	18:40	2	X	-9999.	-1.2	13.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/18/76	IN	19:28	2	X	120.	-1.2	5.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/18/76	DI	19:30	2	X	150.	-1.2	12.5	3	1	1	1	4	1	4	1	4	0	5	0	5	0	5	0	5
03/18/76	IN	20:25	2	X	110.	-1.1	4.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	20:22	2	X	140.	-1.1	11.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/18/76	IN	21:15	2	X	110.	-0.6	4.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
03/18/76	DI	21:16	2	X	140.	-0.6	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	22:05	2	X	120.	-0.5	5.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
03/18/76	DI	22:02	2	X	140.	-0.5	11.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
03/18/76	IN	22:53	2	X	120.	-0.3	5.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/18/76	DI	22:45	2	X	145.	-0.3	12.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	IN	23:50	2	X	125.	-0.2	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/18/76	DI	23:50	2	X	145.	-0.2	11.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
03/22/76	IN	18:09	2	X	110.	-0.6	4.5	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
03/22/76	DI	18:15	2	X	135.	-0.6	11.5	0	6	0	3	3	1	5	0	6	0	6	0	6	0	6	0	6
03/22/76	IN	19:13	2	X	110.	-0.7	4.5	3	7	0	7	3	6	4	4	6	4	6	4	6	4	6	4	6
03/22/76	DI	19:10	2	X	135.	-0.7	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/22/76	IN	20:09	2	X	120.	-0.9	6.5	6	6	3	11	4	11	4	9	6	9	6	9	6	9	6	9	6
03/22/76	DI	20:13	2	X	145.	-0.9	14.5	3	2	0	3	2	2	3	2	3	2	3	2	3	2	3	2	3
03/22/76	IN	21:19	2	X	120.	-1.0	6.0	3	1	1	4	1	3	2	2	3	1	4	1	4	1	4	1	4
03/22/76	DI	21:20	2	X	140.	-1.0	14.5	2	4	24	4	26	2	28	2	28	1	29	1	29	1	29	1	29
03/22/76	IN	22:31	2	X	115.	-1.0	7.0	5	3	5	6	7	6	7	5	8	3	10	3	10	3	10	3	10
03/22/76	DI	22:36	2	X	130.	-1.0	13.0	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
03/22/76	IN	23:31	2	X	-9999.	-0.9	5.5	3	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
03/22/76	DI	23:37	2	X	125.	-0.9	10.0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
03/23/76	IN	00:31	1	X	110.	-0.7	5.5	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
03/23/76	DI	00:35	1	X	130.	-0.7	11.0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
05/27/76	IN	00:35	1	X	130.	-0.2	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/27/76	DI	00:35	1	X	130.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/01/76	IN	21:34	0	X	130.	-0.6	15.5	2	1	7	2	8	1	?	1	9	1	9	1	9	1	9	1	9
06/01/76	DI	21:34	0	X	-9999.	-9.9	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/01/76	IN	23:10	0	X	130.	-0.2	15.0	0	2	9	1	10	1	10	1	10	1	10	1	10	1	10	0	11
06/01/76	DI	23:10	0	X	-9999.	-9.9	15.5	1	1	3	1	4	0	5	0	5	0	5	0	5	0	5	0	5
06/02/76	IN	00:35	0	X	130.	0.2	15.0	0	1	13	0	14	0	14	0	14	0	14	0	14	0	14	0	14
06/02/76	DI	00:35	0	X	-9999.	-9.9	15.5	0	2	6	0	8	0	8	0	8	0	8	0	8	0	8	0	8
06/02/76	IN	19:09	0	X	139.	-0.5	17.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1
06/02/76	DI	19:09	0	X	-9999.	-9.9	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/02/76	IN	20:20	0	X	139.	-0.6	17.0	2	2	2	2	4	2	4	2	4	2	4	2	4	2	4	2	4
06/02/76	DI	20:20	0	X	-9999.	-9.9	17.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/02/76	IN	21:15	0	X	139.	-0.7	16.5	7	5	24	7	29	7	29	6	30	5	31	5	31	4	32	2	34
06/02/76	DI	21:15	0	X	-9999.	-9.9	17.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/02/76	IN	22:55	0	X	137.	-0.3	15.5	10	11	23	10	34	10	34	8	36	8	36	8	36	8	36	8	36
06/02/76	DI	22:55	0	X	-9999.	-9.9	14.0	18	7	30	18	37	17	38	16	39	14	41	14	41	14	41	9	46
06/02/76	IN	23:48	0	X	140.	-9.9	15.5	14	1	2	13	4	12	5	12	5	12	5	12	5	12	5	10	7
06/02/76	DI	23:48	0	X	-9999.	-9.9	16.5	43	0	88	26	105	22	109	22	109	22	109	22	109	21	110	14	117
06/03/76	IN	18:37	0	X	-9999.	-0.5	17.0	4	2	14	2	18	2	18	2	18	2	18	1	19	1	19	1	19
06/03/76	DI	18:37	0	X	-9999.	-9.9	17.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/76	IN	19:39	0	X	-9999.	-0.6	18.0	1	0	6	0	7	0	7	0	7	0	7	0	7	0	7	0	7
06/03/76	DI	19:39	0	X	-9999.	-9.9	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	IN	20:16	0	X	-9999.	-0.7	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/03/76	DI	20:16	0	X	-9999.	-9.9	17.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/03/76	IN	20:59	0	X	-9999.	-0.8	17.5	4	0	20	4	20	2	22	2	22	2	22	2	22	1	23	0	24
06/03/76	DI	20:59	0	X	-9999.	-9.9	17.0	0	3	3	0	6	0	6	0	6	0	6	0	6	0	6	0	6
06/03/76	IN	22:12	0	X	-9999.	-0.8	17.0	5	3	20	6	22	5	23	5	23	5	23	5	23	3	25	3	25
06/03/76	DI	22:12	0	X	-9999.	-9.9	17.0	0	3	9	0	12	0	12	0	12	0	12	0	12	0	12	0	12
06/03/76	IN	22:55	0	X	-9999.	-0.7	16.5	0	3	28	1	30	1	30	1	30	1	30	0	31	0	31	0	31
06/03/76	DI	22:55	0	X	-9999.	-9.9	17.0	2	2	12	3	13	1	15	1	15	0	16	0	16	0	16	0	16
06/03/76	IN	23:39	0	X	-9999.	-0.5	16.0	1	1	13	2	13	2	13	2	13	2	13	1	14	1	14	1	14
06/03/76	DI	23:39	0	X	-9999.	-9.9	17.0	5	7	26	4	34	3	35	3	35	3	35	3	35	3	35	2	36
06/04/76	IN	00:23	0	X	-9999.	-0.3	16.0	0	1	8	0	9	0	9	0	9	0	9	0	9	0	9	0	9
06/04/76	DI	00:23	0	X	-9999.	-9.9	17.0	20	8	59	16	71	10	77	9	78	9	78	9	78	9	78	9	78

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	13:40	2	X	135.	-0.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	13:40	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	14:38	2	X	130.	-1.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	14:38	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	15:25	2	X	130.	-0.9	19.5	0	2	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06/09/76	DI	15:25	0	X	-9999.	-9.9	28.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	16:20	2	X	130.	-1.0	18.0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	2	0	2
06/09/76	DI	16:20	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	17:16	2	X	125.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:16	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:53	2	X	120.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:53	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:35	2	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:35	0	X	-9999.	-9.9	20.0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	IN	20:19	2	X	120.	-0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:19	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:03	2	X	120.	0.5	17.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/09/76	DI	21:03	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:10	2	X	132.	-1.0	19.0	1	1	1	1	2	1	2	1	2	1	2	0	3	0	3	0	3
06/10/76	DI	17:10	0	X	-9999.	-9.9	27.0	0	1	2	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/10/76	IN	18:00	2	X	13000.	-0.6	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:00	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:50	2	X	130.	-0.3	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:50	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:25	2	X	130.	0.1	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:25	0	X	-9999.	-9.9	22.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/76	IN	21:09	2	X	130.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:09	0	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:55	2	X	132.	0.3	18.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	DI	21:55	0	X	-9999.	-9.9	23.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/10/76	IN	23:19	2	X	131.	0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:19	0	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/11/76	IN	00:03	2	X	132.	0.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/11/76	DI	00:03	0	X	-9999.	-9.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/11/76	IN	00:45	2	X	133.	-0.2	18.7	2	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
06/11/76	DI	00:45	0	X	-9999.	-9.9	21.0	0	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1
06/16/76	IN	17:12	2	X	150.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	17:12	0	X	-9999.	-9.9	28.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	18:02	2	X	150.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:02	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	18:53	2	X	145.	-0.6	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	18:53	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	IN	19:39	2	X	150.	-0.8	22.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/16/76	DI	19:39	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	IN	20:24	2	X	160.	-0.8	21.5	2	0	2	2	2	2	2	2	2	2	2	2	2	1	3	0	4
06/16/76	DI	20:24	0	X	-9999.	-9.9	30.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	21:11	2	X	145.	-0.8	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/16/76	DI	21:11	0	X	-9999.	-9.9	30.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	IN	22:36	2	X	140.	-0.7	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/16/76	DI	22:36	0	X	-9999.	-9.9	29.0	0	1	4	0	5	0	5	0	5	0	5	0	5	0	5	0	5
06/16/76	IN	23:40	1	X	130.	-0.4	20.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/16/76	DI	23:40	0	X	-9999.	-9.9	34.0	0	1	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/17/76	IN	00:21	1	X	130.	-0.2	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	00:21	0	X	-9999.	-9.9	24.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/76	IN	16:48	2	X	150.	-0.2	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	16:48	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	17:29	2	X	160.	-0.3	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	17:29	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:09	2	X	170.	-0.4	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:09	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	18:49	2	X	170.	-0.3	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	18:49	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	19:27	2	X	150.	-0.7	21.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	19:27	0	X	-9999.	-9.9	27.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	20:09	2	X	180.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:09	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	20:50	2	X	-9999.	-0.9	27.0	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/17/76	DI	20:50	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:59	2	X	190.	-1.0	22.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	21:59	0	X	-9999.	-9.9	27.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	22:40	2	X	185.	-0.9	21.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	DI	22:40	0	X	-9999.	-9.9	25.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/17/76	IN	23:22	2	X	145.	-0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:22	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:59	1	X	140.	-0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:59	0	X	-9999.	-9.9	26.0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/18/76	IN	00:40	1	X	130.	0.4	20.0	1	1	0	1	1	1	1	1	1	0	2	0	2	0	2	0	2
06/18/76	DI	00:40	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:35	2	X	-9999.	-0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:35	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:28	2	X	-9999.	-0.4	22.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:28	0	X	-9999.	-9.9	31.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	18:14	2	X	150.	-0.2	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:14	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:00	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:00	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:26	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:26	0	X	-9999.	-9.9	31.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/23/76	IN	21:10	2	X	220.	0.2	22.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:10	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	22:27	2	X	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:27	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	23:08	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:08	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (LMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/23/76	IN	23:55	1	X	-9999.	-0.4	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:55	0	X	-9999.	-9.9	28.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	00:35	1	X	260.	-0.5	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	00:35	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	16:28	2	X	162.	-0.9	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	16:28	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	17:10	2	X	-9999.	-0.7	22.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	17:10	0	X	-9999.	-9.9	32.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	17:53	2	X	-9999.	-0.5	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	17:53	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	18:36	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	18:36	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	19:16	2	X	-9999.	-0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	19:16	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	20:04	2	X	410.	0.0	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	20:04	0	X	-9999.	-9.9	29.5	2	0	2	2	2	1	3	1	3	1	3	1	3	1	3	1	3
06/24/76	IN	20:45	2	X	-9999.	0.1	22.5	1	3	1	2	3	0	5	0	5	0	5	0	5	0	5	0	5
06/24/76	DI	20:45	0	X	-9999.	-9.9	29.0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
06/24/76	IN	22:11	2	X	-9999.	0.1	23.5	1	0	3	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/24/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	IN	22:53	1	X	-9999.	-0.1	23.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/24/76	DI	22:53	0	X	-9999.	-9.9	29.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	IN	23:35	1	X	-9999.	-0.1	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/24/76	DI	23:35	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	IN	00:18	1	X	-9999.	-0.3	23.5	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	DI	00:18	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/25/76	IN	00:59	1	X	600.	-0.4	24.0	1	1	1	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/25/76	DI	00:59	0	X	-9999.	-9.9	29.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	17:34	2	X	1000.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	17:34	0	X	950.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	18:33	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	18:33	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

								NUMBER OF INDIVIDUALS															
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	*COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/28/76	IN	19:23	2	X	-9999.	-0.8	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	19:23	0	X	-9999.	-9.9	34.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	20:02	2	X	-9999.	-0.6	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	20:02	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	20:51	2	X	1000.	-0.2	23.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	20:51	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	IN	21:33	2	X	-9999.	0.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/28/76	DI	21:33	0	X	-9999.	-9.9	32.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	IN	23:25	2	X	-9999.	0.3	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/28/76	DI	23:25	0	X	-9999.	-9.9	30.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
06/29/76	IN	00:08	2	X	-9999.	0.2	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	00:08	0	X	-9999.	-9.9	31.0	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/29/76	IN	00:43	1	X	1050.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	00:43	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	18:23	2	X	670.	-0.9	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	18:23	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	19:15	2	X	-9999.	-0.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	19:15	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	20:00	2	X	-9999.	-1.0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:00	0	X	-9999.	-9.9	32.0	1	0	2	1	2	1	2	0	3	0	3	0	3	0	3	0	3
06/29/76	IN	20:47	2	X	-9999.	-0.6	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	20:47	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	21:29	2	X	390.	-0.3	23.7	0	1	1	0	2	0	2	0	2	0	2	0	2	0	2	0	2
06/29/76	DI	21:29	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	22:11	2	X	-9999.	0.0	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	22:11	0	X	-9999.	-9.9	30.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/29/76	IN	22:54	1	X	-9999.	0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	DI	22:54	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/76	IN	23:35	1	X	-9999.	0.3	24.0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	1
06/29/76	DI	23:35	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	00:22	1	X	760.	0.3	23.5	0	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
06/30/76	DI	00:22	0	X	-9999.	-9.9	29.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- LARVAE

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	IN	16:40	2	X	1200.	-0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	17:44	2	X	-9999.	-0.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:44	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:33	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:33	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	20:18	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:18	0	X	-9999.	-9.9	32.0	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	IN	21:03	2	X	-9999.	-0.4	25.0	1	0	1	1	1	1	1	0	2	0	2	0	2	0	2	0	2
06/30/76	DI	21:03	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:02	2	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:02	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:53	2	X	-9999.	0.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:53	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:40	1	X	-9999.	0.3	24.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/30/76	DI	23:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:25	1	X	-9999.	0.4	24.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	00:25	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:29	2	X	290.	-0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:29	0	X	-9999.	-9.9	33.5	0	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7
07/01/76	IN	20:21	2	X	-9999.	-0.8	25.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	20:21	0	X	-9999.	-9.9	31.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	IN	21:05	2	X	-9999.	-0.8	25.5	2	0	2	2	2	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	DI	21:05	0	X	-9999.	-9.9	34.0	0	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4
07/01/76	IN	21:49	2	X	-9999.	-0.5	25.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	DI	21:49	0	X	-9999.	-9.9	33.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	22:32	2	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:32	0	X	-9999.	-9.9	32.5	0	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2
07/01/76	IN	23:22	1	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:22	0	X	-9999.	-9.9	30.0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	23:59	1	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:59	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/09/76	IN	13:40	2	X	135.	-0.9	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	13:40	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	14:38	2	X	130.	-1.2	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	14:38	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	15:25	2	X	130.	-0.9	19.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	15:25	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	16:20	2	X	130.	-1.0	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	16:20	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	17:16	2	X	125.	-0.6	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	17:16	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	18:53	2	X	120.	0.0	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	18:53	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	19:35	2	X	120.	0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	19:35	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	20:19	2	X	120.	-0.3	17.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	20:19	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	IN	21:03	2	X	120.	0.5	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/09/76	DI	21:03	0	X	-9999.	-9.9	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	17:10	2	X	132.	-1.0	19.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/10/76	DI	17:10	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:00	2	X	13000.	-0.6	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:00	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	18:50	2	X	130.	-0.3	17.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	18:50	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	20:25	2	X	130.	0.1	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	20:25	0	X	-9999.	-9.9	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:09	2	X	130.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:09	0	X	-9999.	-9.9	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	21:55	2	X	132.	0.3	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	21:55	0	X	-9999.	-9.9	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	IN	23:19	2	X	131.	0.1	18.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/10/76	DI	23:19	0	X	-9999.	-9.9	20.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
								A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/17/76	IN	20:09	2	X	180.	-0.8	21.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:09	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	20:50	2	X	-9999.	-0.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	20:50	0	X	-9999.	-9.9	27.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	21:59	2	X	190.	-1.0	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	21:59	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	22:40	2	X	185.	-0.9	21.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	22:40	0	X	-9999.	-9.9	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:22	2	X	145.	-0.8	19.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:22	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	IN	23:59	1	X	140.	-0.6	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/17/76	DI	23:59	0	X	-9999.	-9.9	26.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	IN	00:40	1	X	130.	0.4	20.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/18/76	DI	00:40	0	X	-9999.	-9.9	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	16:35	2	X	-9999.	-0.6	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	16:35	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	17:28	2	X	-9999.	-0.4	22.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	17:28	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	18:14	2	X	150.	-0.2	21.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	18:14	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:00	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:00	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	19:42	2	X	-9999.	-0.1	22.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	19:42	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	20:26	2	X	-9999.	0.1	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	20:26	0	X	-9999.	-9.9	31.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	21:10	2	X	220.	0.2	22.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	21:10	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	IN	22:27	2	X	-9999.	0.0	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	22:27	0	X	-9999.	-9.9	29.5	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
06/23/76	IN	23:08	2	X	-9999.	-0.3	22.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/23/76	DI	23:08	0	X	-9999.	-9.9	27.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

ENTRAINMENT VIABILITY-CLUPEIDAE- JUV/ADULTS

								NUMBER OF INDIVIDUALS													
								INITIAL			3 HRS		6 HRS		12 HRS		24 HRS		48 HRS		72 HRS		96 HRS	
DATE	ST	TIME	P	M	COND. (UMHO)	TIDE	TEMP. (C)	A	S	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D
06/30/76	IN	16:40	2	X	1200.	-0.3	23.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	16:40	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	17:44	2	X	-9999.	-0.6	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	17:44	0	X	-9999.	-9.9	28.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	18:33	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	18:33	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	20:18	2	X	-9999.	-0.7	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	20:18	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	21:03	2	X	-9999.	-0.4	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	21:03	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:02	2	X	-9999.	-0.2	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:02	0	X	-9999.	-9.9	32.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	22:53	2	X	-9999.	0.0	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	22:53	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	IN	23:40	1	X	-9999.	0.3	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/30/76	DI	23:40	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	00:25	1	X	-9999.	0.4	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	00:25	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	19:29	2	X	290.	-0.7	23.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	19:29	0	X	-9999.	-9.9	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	20:21	2	X	-9999.	-0.8	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	20:21	0	X	-9999.	-9.9	31.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	21:05	2	X	-9999.	-0.8	25.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:05	0	X	-9999.	-9.9	34.0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
07/01/76	IN	21:49	2	X	-9999.	-0.5	25.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	21:49	0	X	-9999.	-9.9	33.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	22:32	2	X	-9999.	-0.3	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	22:32	0	X	-9999.	-9.9	32.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:22	1	X	-9999.	-0.1	24.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:22	0	X	-9999.	-9.9	30.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	IN	23:59	1	X	-9999.	0.0	24.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/01/76	DI	23:59	0	X	-9999.	-9.9	30.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

VIABILITY- A=ALIVE; S=STUNNED; D=DEAD

PUMP STATUS- P= # OF PUMPS OPERATING; M=MODE OF OPERATION
(F=FULL - T=THROTTLED - X=UNKNOWN)

ST=STATION; DI=DISCHARGE; IN=INTAKE

2. Entrainment Survival Expressed as Abundance (Density) Raw Data Summaries

2.1 ROSETON GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	23:47	1.7	19.5	129.	10.16	0.0	0.0	98.4	0.0	98.4
D-06/14/76	23:47	1.7	27.0	-9999.	7.98	0.0	0.0	125.3	0.0	125.3
I-06/15/76	01:38	2.1	19.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
D-06/15/76	01:38	2.1	24.0	-9999.	10.16	0.0	0.0	393.6	0.0	393.6
I-06/15/76	17:52	1.7	20.4	132.	10.08	0.0	0.0	198.5	0.0	198.5
D-06/15/76	17:52	1.7	30.0	-9999.	9.52	0.0	0.0	315.0	0.0	315.0
I-06/15/76	19:14	1.4	20.0	-9999.	10.38	0.0	0.0	192.6	0.0	192.6
I-06/15/76	21:35	1.2	20.0	-9999.	10.03	0.0	0.0	199.4	0.0	199.4
D-06/15/76	21:35	1.2	27.0	-9999.	9.65	0.0	0.0	414.5	0.0	414.5
I-06/15/76	22:46	1.2	18.7	132.	10.25	0.0	0.0	878.0	0.0	878.0
D-06/15/76	22:46	1.2	27.0	-9999.	10.16	0.0	0.0	295.2	0.0	295.2
I-06/16/76	00:09	1.6	20.0	-9999.	10.38	0.0	0.0	674.2	0.0	674.2
D-06/16/76	00:09	1.6	27.0	-9999.	9.82	0.0	0.0	611.0	0.0	611.0
I-06/15/76	01:18	1.9	19.7	135.	10.47	0.0	0.0	4202.5	0.0	4202.5
D-06/16/76	01:18	1.9	26.0	-9999.	10.56	0.0	0.0	2083.6	0.0	2083.6
I-06/16/76	17:48	2.0	20.9	134.	10.29	0.0	0.0	194.3	0.0	194.3
D-06/16/76	17:48	2.0	33.0	-9999.	6.63	0.0	0.0	150.9	0.0	150.9
I-06/16/76	19:12	1.7	21.0	-9999.	10.83	0.0	0.0	554.2	0.0	554.2
D-06/16/76	19:12	1.7	33.0	-9999.	10.92	0.0	0.0	458.0	0.0	458.0
I-06/16/76	20:18	1.5	21.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/16/76	20:18	1.5	33.0	-9999.	10.25	0.0	0.0	195.1	0.0	195.1
I-06/17/76	00:19	1.4	20.0	-9999.	10.34	0.0	0.0	580.4	0.0	580.4
D-06/17/76	00:19	1.4	28.0	-9999.	10.25	0.0	0.0	487.8	0.0	487.8
I-06/17/76	01:52	1.9	20.7	149.	10.29	0.0	0.0	1262.9	0.0	1262.9
D-06/17/76	01:52	1.9	27.0	-9999.	9.82	0.0	0.0	814.7	0.0	814.7
I-06/17/76	17:37	1.9	21.4	145.	10.56	0.0	0.0	189.4	0.0	189.4
D-06/17/76	17:37	1.9	35.0	-9999.	10.65	0.0	0.0	93.9	0.0	93.9
I-06/17/76	19:19	1.7	21.0	-9999.	9.78	0.0	0.0	613.7	0.0	613.7
D-06/17/76	19:19	1.7	33.0	-9999.	8.36	0.0	0.0	478.5	0.0	478.5
D-06/17/76	20:34	1.5	33.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:21	1.3	21.6	198.	10.08	0.0	0.0	1290.1	0.0	1290.1
D-06/17/76	22:21	1.3	33.0	-9999.	10.08	0.0	0.0	3771.1	0.0	3771.1
I-06/18/76	00:17	1.3	21.0	-9999.	10.74	0.0	0.0	186.3	0.0	186.3
D-06/18/76	00:17	1.3	29.0	-9999.	9.78	0.0	0.0	409.1	0.0	409.1
I-06/18/76	01:24	1.5	21.5	219.	9.90	0.0	0.0	302.9	0.0	302.9
D-06/18/76	01:24	1.5	27.0	-9999.	10.38	0.0	0.0	288.9	0.0	288.9
I-06/21/76	17:38	1.8	23.2	156.	9.99	0.0	0.0	1301.3	0.0	1301.3
D-06/21/76	17:38	1.8	33.0	-9999.	10.51	0.0	0.0	1046.2	0.0	1046.2
I-06/21/76	18:26	1.9	23.0	-9999.	9.90	0.0	0.0	908.7	0.0	908.7
D-06/21/76	18:26	1.9	33.0	-9999.	9.95	0.0	0.0	603.2	0.0	603.2
I-06/21/76	19:21	2.0	23.0	-9999.	10.12	0.0	0.0	691.7	0.0	691.7
D-06/21/76	19:21	2.0	33.0	-9999.	10.12	0.0	0.0	691.7	0.0	691.7
I-06/21/76	20:12	2.1	23.0	-9999.	10.21	0.0	0.0	783.8	0.0	783.8
D-06/21/76	20:12	2.1	33.0	-9999.	10.38	0.0	0.0	385.3	0.0	385.3
I-06/21/76	20:51	2.1	23.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
D-06/21/76	20:51	2.1	33.0	-9999.	9.78	0.0	0.0	306.8	0.0	306.8
I-06/21/76	21:41	2.1	23.1	146.	10.34	0.0	0.0	967.3	0.0	967.3
D-06/21/76	21:41	2.1	33.0	-9999.	10.16	0.0	0.0	295.2	0.0	295.2
I-06/21/76	22:44	1.9	23.0	-9999.	10.12	0.0	0.0	691.7	0.0	691.7
D-06/21/76	22:44	1.9	32.0	-9999.	10.25	0.0	0.0	585.5	0.0	585.5
I-06/21/76	23:36	1.8	22.0	-9999.	9.78	0.0	0.0	818.3	0.0	818.3
D-06/21/76	23:36	1.8	32.0	-9999.	9.69	0.0	0.0	309.6	0.0	309.6
I-06/22/76	00:24	1.6	22.0	-9999.	10.16	0.0	0.0	688.8	0.0	688.8
D-06/22/76	00:24	1.6	31.0	-9999.	10.03	0.0	0.0	398.6	0.0	398.6
I-06/22/76	01:10	1.5	22.0	-9999.	10.60	0.0	0.0	282.9	0.0	282.9
D-06/22/76	01:10	1.5	30.0	-9999.	10.08	0.0	0.0	893.1	0.0	893.1
I-06/22/76	02:00	1.5	22.5	141.	10.25	0.0	0.0	975.6	0.0	975.6
D-06/22/76	02:00	1.5	29.0	-9999.	9.82	0.0	0.0	1018.4	0.0	1018.4
I-06/22/76	17:38	1.6	22.8	152.	10.43	0.0	0.0	383.6	0.0	383.6
D-06/22/76	17:38	1.6	32.0	-9999.	10.16	0.0	0.0	590.4	0.0	590.4

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	18:21	1.8	23.0	-9999.	9.61	0.0	0.0	1457.1	0.0	1457.1
D-06/22/76	18:21	1.8	33.0	-9999.	10.21	0.0	0.0	391.9	0.0	391.9
I-06/22/76	19:01	1.8	23.5	-9999.	10.56	0.0	0.0	1041.8	0.0	1041.8
D-06/22/76	19:01	1.8	33.0	-9999.	10.43	0.0	0.0	479.6	0.0	479.6
I-06/22/76	19:42	1.9	24.0	-9999.	10.34	0.0	0.0	483.6	0.0	483.6
D-06/22/76	19:42	1.9	34.0	-9999.	9.78	0.0	0.0	511.4	0.0	511.4
I-06/22/76	20:22	2.0	24.0	-9999.	10.34	0.0	0.0	677.1	0.0	677.1
D-06/22/76	20:22	2.0	34.0	-9999.	9.86	0.0	0.0	304.2	0.0	304.2
I-06/22/76	21:04	2.1	24.0	-9999.	9.99	0.0	0.0	500.5	0.0	500.5
D-06/22/76	21:04	2.1	34.0	-9999.	10.16	0.0	0.0	393.6	0.0	393.6
I-06/22/76	21:45	2.1	24.0	-9999.	10.08	0.0	0.0	595.5	0.0	595.5
D-06/22/76	21:45	2.1	33.0	-9999.	10.21	0.0	0.0	783.8	0.0	783.8
I-06/22/76	22:30	2.0	23.6	176.	10.25	0.0	0.0	2926.8	0.0	2926.8
D-06/22/76	22:30	2.0	33.0	-9999.	10.08	0.0	0.0	595.4	0.0	595.4
I-06/22/76	23:09	2.0	23.0	-9999.	10.60	0.0	0.0	1791.9	0.0	1791.9
D-06/22/76	23:09	2.0	32.0	-9999.	10.21	0.0	0.0	1077.7	0.0	1077.7
I-06/22/76	23:50	1.9	23.0	-9999.	10.38	0.0	0.0	674.2	0.0	674.2
D-06/22/76	23:50	1.9	31.0	-9999.	10.08	0.0	0.0	297.7	0.0	297.7
I-06/23/76	00:29	1.7	23.0	-9999.	9.82	0.0	0.0	1222.1	0.0	1222.1
D-06/23/76	00:29	1.7	30.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
I-06/23/76	01:09	1.6	23.0	-9999.	9.86	0.0	0.0	1419.6	0.0	1419.6
D-06/23/76	01:09	1.6	28.0	-9999.	10.12	0.0	0.0	98.8	0.0	98.8
I-06/23/76	02:04	1.5	23.5	187.	10.25	0.0	0.0	1268.3	97.6	1365.9
D-06/23/76	02:04	1.5	28.0	-9999.	10.34	0.0	0.0	870.6	0.0	870.6
I-06/23/76	17:50	1.5	23.1	152.	10.56	0.0	0.0	662.9	0.0	662.9
D-06/23/76	17:50	1.5	33.0	-9999.	10.51	0.0	0.0	570.7	0.0	570.7
I-06/23/76	18:28	1.6	23.0	-9999.	10.34	0.0	0.0	193.5	0.0	193.5
D-06/23/76	18:28	1.6	33.0	-9999.	9.73	0.0	0.0	410.9	0.0	410.9
I-06/23/76	19:03	1.7	24.0	-9999.	9.95	0.0	0.0	301.6	0.0	301.6
D-06/23/76	19:03	1.7	33.0	-9999.	10.65	0.0	0.0	469.6	0.0	469.6

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	1.9	24.0	-9999.	10.21	0.0	0.0	293.9	0.0	293.9
D-06/23/76	19:42	1.9	33.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
I-06/23/76	20:20	2.0	24.0	-9999.	10.03	0.0	0.0	897.0	0.0	897.0
D-06/23/76	20:20	2.0	34.0	-9999.	9.95	0.0	0.0	502.6	0.0	502.6
I-06/23/76	21:02	2.1	24.0	-9999.	10.16	0.0	0.0	1279.1	0.0	1279.1
D-06/23/76	21:03	2.1	34.0	-9999.	9.95	0.0	0.0	1105.8	0.0	1105.8
I-06/23/76	21:48	2.2	23.9	149.	10.29	0.0	0.0	1262.8	0.0	1262.8
D-06/23/76	21:48	2.2	33.0	-9999.	9.95	0.0	0.0	804.2	0.0	804.2
I-06/23/76	22:26	2.2	24.0	-9999.	10.47	0.0	0.0	1910.2	0.0	1910.2
D-06/23/76	22:26	2.2	33.0	-9999.	10.03	0.0	0.0	1096.3	0.0	1096.3
I-06/23/76	23:06	2.2	24.0	-9999.	10.38	0.0	0.0	1252.1	0.0	1252.1
D-06/23/76	23:06	2.2	33.0	-9999.	9.82	0.0	0.0	611.0	0.0	611.0
I-06/23/76	23:43	2.1	24.0	-9999.	10.16	0.0	0.0	2263.1	0.0	2263.1
D-06/23/76	23:43	2.1	33.0	-9999.	9.78	0.0	0.0	1329.7	0.0	1329.7
I-06/24/76	00:19	2.0	24.0	-9999.	9.95	0.0	0.0	904.8	0.0	904.8
D-06/24/76	00:19	2.0	33.0	-9999.	10.03	0.0	0.0	1196.0	0.0	1196.0
I-06/24/76	00:59	1.8	24.0	-9999.	10.21	0.0	0.0	881.8	0.0	881.8
D-06/24/76	00:59	1.8	33.0	-9999.	10.08	0.0	0.0	297.7	0.0	297.7
I-06/24/76	01:38	1.7	23.3	148.	9.86	0.0	0.0	811.2	0.0	811.2
D-06/24/76	01:38	1.7	33.0	-9999.	9.95	0.0	0.0	603.2	0.0	603.2
I-06/24/76	17:45	1.3	23.7	156.	10.12	0.0	0.0	988.1	0.0	988.1
D-06/24/76	17:45	1.3	33.0	-9999.	9.99	0.0	0.0	1501.4	0.0	1501.4
I-06/24/76	18:25	1.4	24.0	-9999.	10.47	0.0	0.0	3820.4	0.0	3820.4
D-06/24/76	18:25	1.4	33.0	-9999.	10.12	0.0	0.0	1284.6	0.0	1284.6
I-06/24/76	19:09	1.6	24.0	-9999.	10.65	0.0	0.0	751.3	0.0	751.3
D-06/24/76	19:09	1.6	33.0	-9999.	10.12	0.0	0.0	988.2	0.0	988.2
I-06/24/76	19:54	1.8	24.0	-9999.	10.43	0.0	0.0	2110.2	0.0	2110.2
D-06/24/76	19:54	1.8	34.0	-9999.	10.16	0.0	0.0	1279.1	0.0	1279.1
I-06/24/76	20:35	1.9	24.0	-9999.	10.51	0.0	0.0	2282.6	0.0	2282.6
D-06/24/76	20:35	1.9	34.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	21:19	2.1	24.0	-9999.	10.38	0.0	0.0	2504.4	0.0	2504.4
D-06/24/76	21:19	2.1	34.0	-9999.	10.08	0.0	0.0	1290.1	0.0	1290.1
I-06/24/76	22:02	2.1	24.1	155.	10.65	0.0	0.0	2160.1	0.0	2160.1
D-06/24/76	22:02	2.1	34.0	-9999.	10.08	0.0	0.0	992.4	0.0	992.4
I-06/24/76	22:44	2.2	24.0	-9999.	10.65	0.0	0.0	1878.4	0.0	1878.4
D-06/24/76	22:44	2.2	34.0	-9999.	9.99	0.0	0.0	1601.5	0.0	1601.5
I-06/24/76	23:22	2.1	25.0	-9999.	10.47	0.0	0.0	2387.8	0.0	2387.8
D-06/24/76	23:22	2.1	35.0	-9999.	9.69	0.0	0.0	1754.0	0.0	1754.0
I-06/25/76	00:01	2.1	24.0	-9999.	9.86	0.0	0.0	2839.2	0.0	2839.2
D-06/25/76	00:01	2.1	34.0	-9999.	9.57	0.0	0.0	1672.6	0.0	1672.6
I-06/24/76	00:42	2.0	24.0	-9999.	10.65	0.0	0.0	2535.7	93.9	2629.6
D-06/25/76	00:42	2.0	33.0	-9999.	9.57	0.0	0.0	1359.0	0.0	1359.0
I-06/25/76	01:20	1.9	24.0	-9999.	10.60	0.0	0.0	1037.4	0.0	1037.4
D-06/25/76	01:20	1.9	32.0	-9999.	10.03	0.0	0.0	897.0	0.0	897.0
I-06/25/76	01:59	1.7	23.7	153.	10.03	0.0	0.0	1295.6	0.0	1295.6
D-06/25/76	01:59	1.7	33.0	-9999.	9.86	0.0	0.0	608.4	0.0	608.4
I-06/28/76	17:39	1.4	25.6	172.	9.90	0.0	0.0	302.9	0.0	302.9
D-06/28/76	17:39	1.4	26.0	-9999.	9.99	0.0	0.0	600.6	0.0	600.6
I-06/28/76	18:20	1.3	25.5	-9999.	10.08	0.0	0.0	198.5	0.0	198.5
D-06/28/76	18:20	1.3	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:03	1.2	25.5	-9999.	10.16	0.0	0.0	196.8	0.0	196.8
D-06/28/76	19:03	1.2	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:45	1.6	25.5	-9999.	10.21	0.0	0.0	293.9	0.0	293.9
D-06/28/76	19:45	1.2	26.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
I-06/28/76	20:20	1.3	25.0	-9999.	9.78	0.0	0.0	1227.4	0.0	1227.4
I-06/28/76	21:30	1.6	24.0	-9999.	10.38	0.0	0.0	674.2	0.0	674.2
D-06/28/76	21:30	1.6	25.0	-9999.	9.95	0.0	0.0	301.6	0.0	301.6
I-06/28/76	22:06	1.8	24.6	168.	10.38	0.0	0.0	1059.5	0.0	1059.5
D-06/28/76	22:06	1.8	25.0	-9999.	10.34	0.0	0.0	580.4	0.0	580.4
I-06/28/76	22:51	2.0	24.6	-9999.	10.60	0.0	0.0	848.8	0.0	848.8

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/28/76	22:51	2.0	25.0	-9999.	10.34	0.0	0.0	1160.8	0.0	1160.8
I-06/28/76	23:38	2.1	24.6	-9999.	10.47	0.0	0.0	1050.6	0.0	1050.6
D-06/28/76	23:38	2.1	26.0	-9999.	9.95	0.0	0.0	502.7	0.0	502.7
I-06/29/76	00:19	2.2	24.5	-9999.	10.34	0.0	0.0	1064.1	0.0	1064.1
D-06/28/76	00:19	2.2	26.0	-9999.	9.95	0.0	0.0	603.2	0.0	603.2
I-06/29/76	01:04	2.3	24.5	-9999.	10.38	0.0	0.0	1541.1	0.0	1541.1
D-06/29/76	01:04	2.3	27.0	-9999.	9.90	0.0	0.0	908.7	0.0	908.7
I-06/29/76	01:43	2.3	24.9	166.	9.82	0.0	0.0	509.2	0.0	509.2
D-06/29/76	01:43	2.3	28.0	-9999.	9.82	0.0	0.0	101.8	0.0	101.8
I-06/29/76	17:50	1.5	25.2	178.	9.95	0.0	0.0	100.5	0.0	100.5
D-06/29/76	17:50	1.5	34.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-06/29/76	18:55	1.4	25.0	-9999.	9.86	0.0	0.0	202.8	0.0	202.8
D-06/29/76	18:55	1.4	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/29/76	19:36	1.3	25.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
D-06/29/76	19:36	1.3	34.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
I-06/29/76	20:23	1.2	25.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
D-06/29/76	20:23	1.2	27.0	-9999.	8.75	0.0	0.0	342.9	0.0	342.9
I-06/29/76	21:03	1.3	25.0	-9999.	9.86	0.0	0.0	709.8	101.4	811.2
D-06/29/76	21:03	1.3	33.0	-9999.	10.34	0.0	0.0	96.7	0.0	96.7
I-06/29/76	22:16	1.6	25.0	194.	10.65	0.0	0.0	563.5	93.9	657.4
D-06/29/76	22:16	1.6	31.5	-9999.	7.30	0.0	0.0	1232.9	0.0	1232.9
I-06/29/76	22:56	1.9	25.0	-9999.	9.78	0.0	0.0	613.7	102.3	716.0
D-06/29/76	22:56	1.9	32.0	-9999.	9.82	0.0	0.0	407.4	101.8	509.2
I-06/29/76	23:45	2.1	25.0	-9999.	10.12	0.0	0.0	1185.8	98.8	1284.6
D-06/29/76	23:44	2.1	31.5	-9999.	8.48	0.0	0.0	589.6	0.0	589.6
I-06/30/76	00:26	2.2	25.0	-9999.	10.60	0.0	0.0	754.5	94.3	848.8
D-06/30/76	00:26	2.2	31.0	-9999.	9.73	0.0	0.0	1027.3	0.0	1027.3
I-06/30/76	01:08	2.3	25.0	-9999.	10.51	0.0	0.0	951.1	0.0	951.1
D-06/30/76	01:08	2.3	30.5	-9999.	7.39	0.0	0.0	676.6	0.0	676.6
I-06/30/76	01:47	2.3	25.2	211.	10.12	0.0	0.0	691.7	0.0	691.7

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/30/76	01:47	2.3	29.5	-9999.	10.43	0.0	0.0	575.5	0.0	575.5
I-06/30/76	17:35	1.9	25.4	177.	12.82	0.0	0.0	156.0	0.0	156.0
D-06/30/76	17:35	1.9	35.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-06/30/76	18:26	1.7	25.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
D-06/30/76	18:26	1.7	35.0	-9999.	8.25	0.0	0.0	121.2	0.0	121.2
I-06/30/76	19:05	1.6	25.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/30/76	19:05	1.6	35.0	-9999.	9.66	0.0	0.0	0.0	0.0	0.0
I-06/30/76	19:52	1.5	25.0	-9999.	11.99	0.0	0.0	250.2	0.0	250.2
D-06/30/76	19:52	1.5	35.0	-9999.	7.45	0.0	0.0	0.0	0.0	0.0
I-06/30/76	20:37	1.4	25.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-06/30/76	20:37	1.4	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:26	1.5	25.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
D-06/30/76	21:26	1.5	35.0	-9999.	9.41	0.0	0.0	106.3	0.0	106.3
I-06/30/76	22:08	1.6	24.1	184.	10.60	0.0	0.0	377.2	0.0	377.2
D-06/30/76	22:08	1.6	35.0	-9999.	10.03	0.0	0.0	398.7	0.0	398.7
I-06/30/76	23:02	1.8	25.0	-9999.	10.43	0.0	0.0	671.4	0.0	671.4
D-06/30/76	23:02	1.8	35.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:42	2.0	25.0	-9999.	10.29	0.0	0.0	485.7	0.0	485.7
D-06/30/76	23:42	2.0	35.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
I-07/01/76	00:30	2.2	26.0	-9999.	9.95	0.0	0.0	201.0	0.0	201.0
D-07/01/76	00:30	2.2	34.0	-9999.	8.75	0.0	0.0	228.6	0.0	228.6
I-07/01/76	01:11	2.3	25.0	-9999.	10.03	0.0	0.0	398.6	0.0	398.6
D-07/01/76	01:11	2.3	33.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
I-07/01/76	01:57	2.4	25.0	184.	10.21	0.0	0.0	293.9	0.0	293.9
D-07/01/76	01:57	2.4	31.5	-9999.	8.47	0.0	0.0	0.0	0.0	0.0
I-07/01/76	17:23	2.1	26.0	200.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:23	2.1	34.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/01/76	18:06	1.9	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/01/76	18:06	1.9	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/01/76	18:51	1.8	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/01/76	18:51	1.8	34.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/01/76	19:39	1.7	25.0	-9999.	9.95	0.0	0.0	502.6	0.0	502.6
D-07/01/76	19:39	1.7	34.0	-9999.	9.07	0.0	0.0	220.5	0.0	220.5
I-07/01/76	20:18	1.6	25.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
D-07/01/76	20:18	1.6	34.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
I-07/01/76	21:03	1.5	26.0	-9999.	10.03	0.0	0.0	99.7	199.4	299.1
D-07/01/76	21:03	1.5	34.0	-9999.	9.35	0.0	0.0	213.9	0.0	213.9
I-07/01/76	21:44	1.5	25.0	-9999.	9.95	0.0	0.0	301.6	0.0	301.6
D-07/01/76	21:44	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/01/76	22:40	1.5	25.0	-9999.	10.34	0.0	0.0	96.7	0.0	96.7
D-07/01/76	22:40	1.5	34.0	-9999.	9.35	0.0	0.0	320.9	0.0	320.9
I-07/01/76	23:20	1.6	25.3	191.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:20	1.6	32.0	-9999.	9.99	0.0	0.0	200.2	0.0	200.2
I-07/02/76	00:10	1.8	25.0	-9999.	10.43	0.0	0.0	479.6	0.0	479.6
D-07/02/76	00:10	1.8	32.0	-9999.	9.35	0.0	0.0	107.0	107.0	214.0
I-07/02/76	01:00	2.0	25.0	-9999.	10.69	0.0	0.0	654.6	187.0	841.6
D-07/02/76	01:00	2.0	31.0	-9999.	9.95	0.0	0.0	0.0	201.1	201.1
I-07/02/76	02:10	2.2	25.3	189.	10.56	0.0	0.0	189.4	94.7	284.1
D-07/02/76	01:50	2.2	29.5	-9999.	9.35	0.0	0.0	320.9	0.0	320.9
I-07/06/76	17:30	1.9	27.2	219.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:30	1.9	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:30	2.0	27.0	-9999.	10.56	0.0	0.0	0.0	94.7	94.7
D-07/06/76	18:30	2.0	36.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:23	2.2	27.0	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:23	2.2	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:10	2.3	27.0	-9999.	10.60	0.0	0.0	188.6	0.0	188.6
D-07/06/76	20:10	2.3	36.5	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:52	2.3	27.5	-9999.	10.21	0.0	0.0	98.0	489.9	587.9
D-07/06/76	20:52	2.3	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:45	2.2	27.0	-9999.	10.08	0.0	0.0	99.2	1488.6	1587.8

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/06/76	21:45	2.2	36.5	-9999.	9.35	0.0	0.0	107.0	107.0	214.0
I-07/06/76	22:35	2.0	26.5	-9999.	9.78	0.0	0.0	818.3	1022.9	1841.2
D-07/06/76	22:35	2.0	37.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
I-07/06/76	23:32	1.8	26.4	209.	9.86	0.0	0.0	202.8	1723.8	1926.6
D-07/06/76	23:32	1.8	34.0	-9999.	10.46	0.0	0.0	286.8	0.0	286.8
I-07/07/76	00:17	1.7	26.0	-9999.	9.78	0.0	0.0	306.8	920.6	1227.4
D-07/07/76	00:17	1.7	34.0	-9999.	10.08	0.0	0.0	198.5	99.2	297.7
I-07/07/76	01:10	1.5	26.0	-9999.	9.86	0.0	0.0	101.4	1216.8	1318.2
D-07/07/76	01:10	1.5	33.0	-9999.	8.75	0.0	0.0	342.9	0.0	342.9
I-07/07/76	01:58	1.4	26.2	207.	9.86	0.0	0.0	405.6	709.8	1115.4
D-07/07/76	01:58	1.4	33.0	-9999.	9.78	0.0	0.0	306.8	0.0	306.8
I-07/07/76	17:30	1.7	25.9	201.	10.51	0.0	0.0	0.0	95.1	95.1
D-07/07/76	17:30	1.7	31.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:08	2.1	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:08	2.1	31.0	-9999.	8.70	0.0	0.0	114.9	0.0	114.9
I-07/07/76	19:50	2.2	26.0	-9999.	9.82	0.0	0.0	0.0	101.8	101.8
D-07/07/76	19:50	2.2	31.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:02	2.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:02	2.4	31.0	-9999.	8.19	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:55	2.4	26.5	-9999.	10.25	0.0	0.0	97.6	97.6	195.2
D-07/07/76	21:55	2.4	31.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
I-07/07/76	22:45	2.3	26.5	-9999.	9.99	0.0	0.0	200.2	300.3	500.5
D-07/07/76	22:45	2.3	31.0	-9999.	8.51	0.0	0.0	117.5	0.0	117.5
I-07/07/76	23:36	2.1	26.5	203.	10.12	0.0	0.0	889.3	691.7	1581.0
D-07/07/76	23:36	2.1	32.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
I-07/08/76	00:29	1.9	26.0	-9999.	9.82	0.0	0.0	509.2	101.8	611.0
D-07/08/76	00:29	1.9	32.0	-9999.	9.41	0.0	0.0	0.0	106.3	106.3
I-07/08/76	01:09	1.8	26.0	-9999.	9.78	0.0	0.0	102.3	716.0	818.3
D-07/08/76	01:09	1.8	29.0	-9999.	10.08	0.0	0.0	397.0	396.9	793.9
I-07/08/76	01:57	1.6	25.1	202.	9.99	0.0	0.0	100.1	800.8	900.9

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/08/76	01:57	1.6	29.0	-9999.	9.23	0.0	0.0	650.1	0.0	650.1
I-07/08/76	17:31	1.3	24.9	200.	10.21	0.0	0.0	98.0	0.0	98.0
D-07/08/76	17:31	1.3	31.0	-9999.	10.47	0.0	0.0	95.5	0.0	95.5
I-07/08/76	18:25	1.6	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:25	1.6	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:06	1.8	25.5	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:06	1.8	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:48	2.0	25.5	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:48	2.0	31.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:28	2.1	26.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
D-07/08/76	20:28	2.1	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:12	2.2	25.1	203.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:12	2.2	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:57	2.3	26.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:57	2.3	31.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-07/08/76	22:40	2.3	26.0	-9999.	10.38	0.0	0.0	96.3	0.0	96.3
D-07/08/76	22:40	2.3	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:23	2.3	26.5	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:23	2.3	33.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
I-07/09/76	00:00	2.2	26.0	-9999.	10.08	0.0	0.0	595.4	893.2	1488.6
D-07/09/76	00:00	2.2	33.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
I-07/09/76	00:47	2.0	26.0	-9999.	10.03	0.0	0.0	897.0	996.7	1893.7
D-07/09/76	00:47	2.0	33.0	-9999.	9.90	0.0	0.0	201.9	504.8	706.7
I-07/09/76	01:29	1.9	26.0	-9999.	10.03	0.0	0.0	0.0	897.0	897.0
D-07/09/76	01:29	1.9	33.0	-9999.	9.78	0.0	0.0	102.3	409.1	511.4
I-07/09/76	02:07	1.8	25.2	205.	10.16	0.0	0.0	196.8	295.2	492.0
D-07/09/76	02:07	1.8	30.0	-9999.	10.12	0.0	0.0	98.8	197.6	296.4
I-07/12/76	17:34	1.4	25.4	204.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:34	1.4	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:15	1.3	26.5	-9999.	10.12	0.0	0.0	98.8	0.0	98.8

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/12/76	18:15	1.3	34.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:56	1.2	26.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:56	1.2	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:34	1.2	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:34	1.2	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:10	1.2	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:10	1.2	35.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:49	1.3	25.5	-9999.	10.12	0.0	0.0	0.0	494.1	494.1
D-07/12/76	20:49	1.3	35.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/12/76	21:31	1.5	25.5	-9999.	10.56	0.0	0.0	0.0	568.2	568.2
D-07/12/76	21:31	1.5	35.0	-9999.	10.21	0.0	0.0	0.0	195.9	195.9
I-07/12/76	22:12	1.7	24.4	191.	9.82	0.0	0.0	101.8	1120.2	1222.0
D-07/12/76	22:12	1.7	33.0	-9999.	9.90	0.0	0.0	0.0	201.9	201.9
I-07/12/76	22:49	1.9	25.0	-9999.	10.25	0.0	0.0	0.0	195.1	195.1
D-07/12/76	22:49	1.9	32.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
I-07/12/76	23:31	2.0	25.5	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/12/76	23:31	2.0	32.0	-9999.	10.51	0.0	0.0	0.0	95.1	95.1
I-07/13/76	00:12	2.1	25.5	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:12	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	00:54	2.2	25.5	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:54	2.2	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	01:30	2.3	25.5	-9999.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	01:30	2.3	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	02:10	2.3	25.5	198.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	02:10	2.3	30.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:36	1.6	24.7	190.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:36	1.6	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:12	1.5	25.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:12	1.5	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:52	1.4	25.5	-9999.	9.82	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/13/76	18:52	1.4	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:30	1.3	25.5	-9999.	9.57	0.0	0.0	104.5	104.5	209.0
D-07/13/76	19:30	1.3	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:05	1.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:05	1.2	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:45	1.2	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:45	1.2	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/13/76	21:21	1.2	25.0	-9999.	9.82	0.0	0.0	0.0	203.7	203.7
D-07/13/76	21:21	1.3	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:00	1.4	24.2	184.	10.51	0.0	0.0	0.0	380.4	380.4
D-07/13/76	22:00	1.4	33.0	-9999.	10.16	0.0	0.0	0.0	295.2	295.2
I-07/13/76	22:42	1.7	25.0	-9999.	9.86	0.0	0.0	0.0	202.8	202.8
D-07/13/76	22:42	1.7	32.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:19	1.9	25.0	-9999.	10.51	0.0	0.0	95.1	285.3	380.4
D-07/13/76	23:19	1.9	32.0	-9999.	9.78	0.0	0.0	0.0	204.6	204.6
I-07/13/76	23:56	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	402.1	402.1
D-07/13/76	23:56	2.0	32.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:34	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	297.7	297.7
D-07/14/76	00:34	2.1	31.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:11	2.2	25.0	-9999.	10.38	0.0	0.0	0.0	96.3	96.3
D-07/14/76	01:11	2.2	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:48	2.3	24.3	187.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:48	2.3	31.0	-9999.	9.73	0.0	0.0	0.0	102.7	102.7
I-07/14/76	17:33	1.8	24.8	187.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:33	1.8	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:09	1.7	25.5	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:09	1.7	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:49	1.6	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:49	1.6	35.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:28	1.5	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/14/76	19:28	1.5	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:06	1.4	25.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
D-07/14/76	20:06	1.4	35.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:42	1.3	25.0	-9999.	10.03	0.0	0.0	199.3	498.4	697.7
D-07/14/76	20:42	1.3	35.0	-9999.	10.12	0.0	0.0	98.8	0.0	98.8
I-07/14/76	21:26	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	201.1	201.1
D-07/14/76	21:26	1.3	35.0	-9999.	10.56	0.0	0.0	0.0	94.7	94.7
I-07/14/76	22:00	1.3	24.2	179.	10.12	0.0	0.0	0.0	592.9	592.9
D-07/14/76	22:00	1.3	35.0	-9999.	10.34	0.0	0.0	96.7	96.7	193.4
I-07/14/76	22:39	1.4	25.0	-9999.	10.16	0.0	0.0	0.0	590.4	590.4
D-07/14/76	22:39	1.4	35.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
I-07/14/76	23:16	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	282.9	282.9
D-07/14/76	23:16	1.5	34.0	-9999.	10.08	0.0	0.0	0.0	198.5	198.5
I-07/14/76	23:57	1.8	25.0	-9999.	10.03	0.0	0.0	99.7	996.7	1096.4
D-07/14/76	23:57	1.8	34.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
I-07/15/76	00:34	1.9	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/15/76	00:34	1.9	34.0	-9999.	10.12	0.0	0.0	98.8	0.0	98.8
I-07/15/76	01:15	2.0	25.0	-9999.	10.08	0.0	0.0	0.0	198.5	198.5
D-07/15/76	01:15	2.0	32.0	-9999.	10.34	0.0	0.0	96.7	96.7	193.4
I-07/15/76	01:53	2.1	24.3	183.	10.56	0.0	0.0	0.0	284.1	284.1
D-07/15/76	01:53	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:59	1.9	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:59	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:38	1.7	25.7	189.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:38	1.7	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:19	1.6	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:19	1.6	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	1.5	26.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-07/15/76	19:58	1.5	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:35	1.4	26.0	-9999.	10.08	0.0	0.0	396.9	297.7	694.6

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/15/76	20:35	1.4	36.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:13	1.3	26.0	-9999.	9.78	0.0	0.0	0.0	102.3	102.3
D-07/15/76	21:13	1.3	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:53	1.3	25.0	181.	10.47	0.0	0.0	0.0	477.5	477.5
D-07/15/76	21:53	1.3	35.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:32	1.3	25.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
D-07/15/76	22:32	1.3	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:10	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	195.9	195.9
D-07/15/76	23:10	1.4	35.0	-9999.	10.12	0.0	0.0	0.0	197.6	197.6
I-07/15/76	23:46	1.5	25.0	-9999.	10.60	0.0	0.0	94.3	94.3	188.6
D-07/15/76	23:46	1.5	33.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/16/76	00:40	1.8	25.0	-9999.	9.99	0.0	0.0	0.0	400.4	400.4
D-07/16/76	00:40	1.8	31.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/16/76	01:20	1.9	25.0	-9999.	10.12	0.0	0.0	296.4	494.1	790.5
D-07/16/76	01:20	1.9	31.0	-9999.	10.03	0.0	0.0	99.7	99.7	199.4
I-07/16/76	01:55	2.0	25.0	181.	10.60	0.0	0.0	0.0	282.9	282.9
D-07/16/76	01:55	2.0	31.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
I-07/19/76	17:30	1.9	26.0	177.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	17:30	1.9	36.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:08	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:08	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:47	2.0	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:47	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/19/76	19:23	2.0	26.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/19/76	19:23	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:01	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:01	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:40	1.9	25.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
D-07/19/76	20:40	1.9	36.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	21:23	1.8	25.0	177.	10.12	0.0	0.0	0.0	98.8	98.8

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/19/76	21:23	1.8	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/19/76	22:00	1.7	25.0	-9999.	10.03	0.0	0.0	0.0	99.7	99.7
D-07/19/76	22:00	1.7	35.0	-9999.	10.34	0.0	0.0	96.7	96.7	193.4
I-07/19/76	22:38	1.6	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	22:38	1.6	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	23:18	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	400.4	400.4
D-07/19/76	23:18	1.5	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	23:57	1.4	25.0	-9999.	10.12	0.0	0.0	98.8	98.8	197.6
D-07/19/76	23:57	1.4	33.0	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
I-07/20/76	00:35	1.3	25.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/20/76	00:35	1.3	31.0	-9999.	10.38	0.0	0.0	0.0	96.3	96.3
I-07/20/76	01:10	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
D-07/20/76	01:10	1.3	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/20/76	01:54	1.3	25.0	175.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/20/76	01:54	1.3	31.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
I-07/20/76	17:32	1.8	26.0	183.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/20/76	17:32	1.8	37.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:10	1.9	26.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
D-07/20/76	18:10	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:45	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	18:45	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/20/76	19:25	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	19:25	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:04	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/20/76	20:04	2.0	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:43	2.0	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/20/76	20:43	2.0	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:20	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/20/76	21:20	2.0	36.0	-9999.	9.84	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:59	1.9	25.0	185.	10.03	0.0	0.0	0.0	99.7	99.7

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/20/76	21:59	1.9	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	22:51	1.8	26.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/20/76	22:51	1.8	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	23:33	1.6	26.0	-9999.	9.90	0.0	0.0	0.0	202.0	202.0
D-07/20/76	23:33	1.6	35.0	-9999.	9.17	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:15	1.6	25.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
D-07/21/76	00:15	1.6	32.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:53	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	600.6	600.6
D-07/21/76	00:53	1.5	31.0	-9999.	9.07	0.0	0.0	0.0	110.2	110.2
I-07/21/76	01:33	1.4	25.0	-9999.	9.90	0.0	0.0	101.0	302.9	403.9
D-07/21/76	01:33	1.4	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/21/76	02:11	1.4	25.4	191.	9.99	0.0	0.0	0.0	100.1	100.1
D-07/21/76	02:11	1.4	31.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
I-07/21/76	17:29	1.7	25.0	177.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	17:29	1.7	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:06	1.8	25.5	-9999.	10.03	0.0	0.0	199.3	0.0	199.3
D-07/21/76	18:06	1.8	36.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:52	1.9	26.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/21/76	18:52	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/21/76	19:30	2.0	26.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	19:30	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:06	2.0	26.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
D-07/21/76	20:06	2.0	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:44	2.0	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/21/76	20:44	2.0	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	21:23	2.0	25.9	183.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/21/76	21:23	2.0	36.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/21/76	22:04	2.0	25.5	-9999.	10.12	0.0	0.0	0.0	197.6	197.6
D-07/21/76	22:04	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	22:43	1.9	25.5	-9999.	10.21	0.0	0.0	0.0	293.9	293.9

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/21/76	22:43	1.9	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/21/76	23:25	1.7	26.0	-9999.	7.95	0.0	0.0	0.0	301.6	301.6
D-07/21/76	23:25	1.7	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/21/76	23:55	1.7	25.0	-9999.	9.65	0.0	0.0	0.0	414.5	414.5
D-07/21/76	23:53	1.7	35.0	-9999.	9.66	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:34	1.5	25.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
D-07/22/76	00:34	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/22/76	01:10	1.5	25.0	-9999.	10.12	0.0	0.0	0.0	197.6	197.6
D-07/22/76	01:10	1.5	33.0	-9999.	9.86	0.0	0.0	0.0	202.8	202.8
I-07/22/76	01:50	1.4	25.0	198.	9.90	0.0	0.0	0.0	403.9	403.9
D-07/22/76	01:50	1.4	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/22/76	17:24	1.5	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	17:24	1.5	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:01	1.7	25.0	179.	10.12	0.0	0.0	98.8	0.0	98.8
D-07/22/76	18:01	1.7	36.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:46	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:46	1.9	37.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:22	2.0	26.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:22	2.0	37.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:59	2.1	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:59	2.1	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/22/76	20:38	2.1	26.5	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
D-07/22/76	20:38	2.1	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:16	2.2	27.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:16	2.2	36.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
I-07/22/76	21:55	2.3	27.0	187.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:55	2.3	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	22:31	2.2	27.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/22/76	22:31	2.2	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/22/76	23:07	2.1	26.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/21/76	22:43	1.9	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/21/76	23:25	1.7	26.0	-9999.	9.95	0.0	0.0	0.0	301.6	301.6
D-07/21/76	23:25	1.7	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/21/76	23:55	1.7	25.0	-9999.	9.65	0.0	0.0	0.0	414.5	414.5
D-07/21/76	23:53	1.7	35.0	-9999.	9.66	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:34	1.5	25.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
D-07/22/76	00:34	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/22/76	01:10	1.5	25.0	-9999.	10.12	0.0	0.0	0.0	197.6	197.6
D-07/22/76	01:10	1.5	33.0	-9999.	9.86	0.0	0.0	0.0	202.8	202.8
I-07/22/76	01:50	1.4	25.0	198.	9.90	0.0	0.0	0.0	403.9	403.9
D-07/22/76	01:50	1.4	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/22/76	17:24	1.5	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	17:24	1.5	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:01	1.7	25.0	179.	10.12	0.0	0.0	98.8	0.0	98.8
D-07/22/76	18:01	1.7	36.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:46	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:46	1.9	37.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:22	2.0	26.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:22	2.0	37.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:59	2.1	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:59	2.1	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/22/76	20:38	2.1	26.5	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
D-07/22/76	20:38	2.1	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:16	2.2	27.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:16	2.2	36.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
I-07/22/76	21:55	2.3	27.0	187.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:55	2.3	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	22:31	2.2	27.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/22/76	22:31	2.2	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/22/76	23:07	2.1	26.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/22/76	23:07	2.1	36.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
I-07/23/76	23:47	2.0	26.0	-9999.	10.06	0.0	0.0	99.4	0.0	99.4
D-07/22/76	23:47	2.0	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/23/76	00:33	1.9	26.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
D-07/23/76	00:33	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:11	1.8	26.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:11	1.8	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:53	1.6	25.0	182.	10.29	0.0	0.0	0.0	97.1	97.1
D-07/23/76	01:53	1.6	33.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/26/76	17:32	1.2	26.0	178.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:32	1.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:13	1.2	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:13	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:52	1.2	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:52	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:30	1.2	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:30	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:11	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:11	1.5	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:51	1.7	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:51	1.7	33.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-07/26/76	21:27	1.9	25.3	174.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/26/76	21:27	1.9	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:07	2.0	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:07	2.0	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:45	2.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:45	2.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	23:25	2.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/26/76	23:25	2.3	33.0	-9999.	10.43	0.0	0.0	95.9	0.0	95.9
I-07/27/76	00:05	2.4	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/27/76	00:05	2.4	33.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:45	2.4	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/27/76	00:45	2.4	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/27/76	01:25	2.3	26.0	-9999.	10.29	0.0	0.0	0.0	194.3	194.3
D-07/27/76	01:25	2.3	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/27/76	02:05	2.2	25.4	177.	9.82	0.0	0.0	0.0	101.8	101.8
D-07/27/76	02:05	2.2	33.0	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
I-07/27/76	17:38	1.3	26.0	178.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/27/76	17:38	1.3	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:16	1.2	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:16	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:54	1.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:54	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	19:37	1.2	25.0	-9999.	10.16	0.0	0.0	0.0	98.4	98.4
D-07/27/76	19:37	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:13	1.2	25.0	-9999.	10.35	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:13	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:53	1.5	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:53	1.5	32.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/27/76	21:33	1.8	25.0	-9999.	10.25	0.0	0.0	97.6	97.6	195.2
D-07/27/76	21:33	1.8	32.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:13	1.9	25.0	-9999.	10.03	0.0	0.0	0.0	99.7	99.7
D-07/27/76	22:13	1.9	32.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:53	2.0	25.0	173.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/27/76	22:53	2.0	32.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/27/76	23:25	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:25	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:05	2.3	25.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
D-07/28/76	00:05	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:45	2.3	25.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/28/76	00:45	2.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/28/76	01:25	2.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	01:25	2.3	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/28/76	02:01	2.3	25.0	176.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	02:01	2.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:32	1.5	26.3	177.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	17:32	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:08	1.4	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:08	1.4	33.0	-9999.	9.61	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:48	1.3	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:48	1.3	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:26	1.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:26	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:05	1.2	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:05	1.2	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:42	1.2	25.0	-9999.	9.73	0.0	0.0	0.0	205.5	205.5
D-07/28/76	20:42	1.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:22	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
D-07/28/76	21:22	1.4	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:01	1.6	25.0	169.	10.47	0.0	0.0	0.0	382.0	382.0
D-07/28/76	22:01	1.6	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:39	1.8	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:39	1.8	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:12	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:12	2.0	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:50	2.1	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:50	2.1	34.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:25	2.2	25.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/29/76	00:25	2.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:05	2.3	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDAE FAMILY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/29/76	01:05	2.3	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:42	2.3	26.0	177.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/29/76	01:42	2.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	17:38	1.7	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/29/76	17:38	1.7	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:11	1.6	25.4	172.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:11	1.6	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:51	1.5	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:51	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:30	1.4	25.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:30	1.4	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:13	1.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:12	1.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:45	1.3	25.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:45	1.3	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/29/76	21:25	1.3	25.1	170.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/29/76	21:25	1.3	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/29/76	22:45	1.7	25.0	-9999.	10.08	0.0	0.0	0.0	595.4	595.4
D-07/29/76	22:45	1.7	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/29/76	23:25	1.9	25.0	-9999.	9.65	0.0	0.0	0.0	725.3	725.3
D-07/29/76	23:25	1.9	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:15	2.1	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:15	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:54	2.2	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:54	2.2	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/30/76	01:31	2.3	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/30/76	01:31	2.3	32.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/30/76	02:08	2.3	25.2	172.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/30/76	02:08	2.3	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	23:47	1.7	19.5	129.	10.16	0.0	0.0	0.0	0.0	0.0
D-06/14/76	23:47	1.7	27.0	-9999.	7.98	0.0	0.0	125.3	0.0	125.3
I-06/15/76	01:38	2.1	19.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/15/76	01:38	2.1	24.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-06/15/76	17:52	1.7	20.4	132.	10.08	0.0	0.0	99.2	0.0	99.2
D-06/15/76	17:52	1.7	30.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
I-06/15/76	19:14	1.4	20.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-06/15/76	21:35	1.2	20.0	-9999.	10.03	0.0	0.0	199.3	0.0	199.3
D-06/15/76	21:35	1.2	27.0	-9999.	9.65	0.0	0.0	103.6	0.0	103.6
I-06/15/76	22:46	1.2	18.7	132.	10.25	0.0	0.0	0.0	0.0	0.0
D-06/15/76	22:46	1.2	27.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-06/16/76	00:09	1.6	20.0	-9999.	10.38	0.0	0.0	481.6	0.0	481.6
D-06/16/76	00:09	1.6	27.0	-9999.	9.82	0.0	0.0	101.8	0.0	101.8
I-06/15/76	01:18	1.9	19.7	135.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/16/76	01:18	1.9	26.0	-9999.	10.56	0.0	0.0	94.7	0.0	94.7
I-06/16/76	17:48	2.0	20.9	134.	10.29	0.0	0.0	291.4	0.0	291.4
D-06/16/76	17:48	2.0	33.0	-9999.	6.63	0.0	0.0	0.0	0.0	0.0
I-06/16/76	19:12	1.7	21.0	-9999.	10.83	0.0	0.0	184.7	0.0	184.7
D-06/16/76	19:12	1.7	33.0	-9999.	10.92	0.0	0.0	91.6	0.0	91.6
I-06/16/76	20:18	1.5	21.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/16/76	20:18	1.5	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-06/17/76	00:19	1.4	20.0	-9999.	10.34	0.0	0.0	290.2	0.0	290.2
D-06/17/76	00:19	1.4	28.0	-9999.	10.25	0.0	0.0	195.1	0.0	195.1
I-06/17/76	01:52	1.9	20.7	149.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/17/76	01:52	1.9	27.0	-9999.	9.82	0.0	0.0	101.8	0.0	101.8
I-06/17/76	17:37	1.9	21.4	145.	10.56	0.0	0.0	94.7	0.0	94.7
D-06/17/76	17:37	1.9	35.0	-9999.	10.65	0.0	0.0	93.9	0.0	93.9
I-06/17/76	19:19	1.7	21.0	-9999.	9.78	0.0	0.0	306.8	0.0	306.8
D-06/17/76	19:19	1.7	33.0	-9999.	8.36	0.0	0.0	358.9	0.0	358.9
D-06/17/76	20:34	1.5	33.0	-9999.	10.03	0.0	0.0	498.3	0.0	498.3

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:21	1.3	21.6	198.	10.08	0.0	0.0	198.5	0.0	198.5
D-06/17/76	22:21	1.3	33.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-06/18/76	00:17	1.3	21.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:17	1.3	29.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/18/76	01:24	1.5	21.5	219.	9.90	0.0	0.0	101.0	0.0	101.0
D-06/18/76	01:24	1.5	27.0	-9999.	10.38	0.0	0.0	385.3	0.0	385.3
I-06/21/76	17:33	1.8	23.2	156.	9.99	0.0	0.0	0.0	0.0	0.0
D-06/21/76	17:38	1.8	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-06/21/76	18:26	1.9	23.0	-9999.	9.90	0.0	0.0	504.9	0.0	504.9
D-06/21/76	18:26	1.9	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:21	2.0	23.0	-9999.	10.12	0.0	0.0	98.8	0.0	98.8
D-06/21/76	19:21	2.0	33.0	-9999.	10.12	0.0	0.0	197.6	0.0	197.6
I-06/21/76	20:12	2.1	23.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:12	2.1	33.0	-9999.	10.38	0.0	0.0	192.6	0.0	192.6
I-06/21/76	20:51	2.1	23.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:51	2.1	33.0	-9999.	9.78	0.0	0.0	102.3	0.0	102.3
I-06/21/76	21:41	2.1	23.1	146.	10.34	0.0	0.0	290.2	0.0	290.2
D-06/21/76	21:41	2.1	33.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
I-06/21/76	22:44	1.9	23.0	-9999.	10.12	0.0	0.0	988.1	0.0	988.1
D-06/21/76	22:44	1.9	32.0	-9999.	10.25	0.0	0.0	1463.7	0.0	1463.7
I-06/21/76	23:36	1.8	22.0	-9999.	9.78	0.0	0.0	1432.0	0.0	1432.0
D-06/21/76	23:36	1.8	32.0	-9999.	9.69	0.0	0.0	412.7	0.0	412.7
I-06/22/76	00:24	1.6	22.0	-9999.	10.16	0.0	0.0	196.8	0.0	196.8
D-06/22/76	00:24	1.6	31.0	-9999.	10.03	0.0	0.0	996.7	0.0	996.7
I-06/22/76	01:10	1.5	22.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-06/22/76	01:10	1.5	30.0	-9999.	10.08	0.0	0.0	198.5	0.0	198.5
I-06/22/76	02:00	1.5	22.5	141.	10.25	0.0	0.0	390.2	0.0	390.2
D-06/22/76	02:00	1.5	29.0	-9999.	9.82	0.0	0.0	203.7	0.0	203.7
I-06/22/76	17:38	1.6	22.8	152.	10.43	0.0	0.0	95.9	0.0	95.9
D-06/22/76	17:38	1.6	32.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	18:21	1.8	23.0	-9999.	9.61	0.0	0.0	312.3	0.0	312.3
D-06/22/76	18:21	1.8	33.0	-9999.	10.21	0.0	0.0	195.9	0.0	195.9
I-06/22/76	19:01	1.8	23.5	-9999.	10.56	0.0	0.0	189.4	0.0	189.4
D-06/22/76	19:01	1.8	33.0	-9999.	10.43	0.0	0.0	191.8	0.0	191.8
I-06/22/76	19:42	1.9	24.0	-9999.	10.34	0.0	0.0	96.7	0.0	96.7
D-06/22/76	19:42	1.9	34.0	-9999.	9.78	0.0	0.0	102.3	0.0	102.3
I-06/22/76	20:22	2.0	24.0	-9999.	10.34	0.0	0.0	96.7	0.0	96.7
D-06/22/76	20:22	2.0	34.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
I-06/22/76	21:04	2.1	24.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
D-06/22/76	21:04	2.1	34.0	-9999.	10.16	0.0	0.0	492.0	0.0	492.0
I-06/22/76	21:45	2.1	24.0	-9999.	10.08	0.0	0.0	793.9	0.0	793.9
D-06/22/76	21:45	2.1	33.0	-9999.	10.21	0.0	0.0	1175.7	0.0	1175.7
I-06/22/76	22:30	2.0	23.6	176.	10.25	0.0	0.0	1170.7	0.0	1170.7
D-06/22/76	22:30	2.0	33.0	-9999.	10.08	0.0	0.0	198.5	0.0	198.5
I-06/22/76	23:09	2.0	23.0	-9999.	10.60	0.0	0.0	1414.7	0.0	1414.7
D-06/22/76	23:09	2.0	32.0	-9999.	10.21	0.0	0.0	881.8	0.0	881.8
I-06/22/76	23:50	1.9	23.0	-9999.	10.38	0.0	0.0	481.6	0.0	481.6
D-06/22/76	23:50	1.9	31.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
I-06/23/76	00:29	1.7	23.0	-9999.	9.82	0.0	0.0	2546.0	0.0	2546.0
D-06/23/76	00:29	1.7	30.0	-9999.	9.95	0.0	0.0	1105.8	0.0	1105.8
I-06/23/76	01:09	1.6	23.0	-9999.	9.86	0.0	0.0	2028.0	0.0	2028.0
D-06/23/76	01:09	1.6	28.0	-9999.	10.12	0.0	0.0	790.5	0.0	790.5
I-06/23/76	02:04	1.5	23.5	187.	10.25	0.0	0.0	195.2	0.0	195.2
D-06/23/76	02:04	1.5	28.0	-9999.	10.34	0.0	0.0	773.9	0.0	773.9
I-06/23/76	17:50	1.5	23.1	152.	10.56	0.0	0.0	189.4	0.0	189.4
D-06/23/76	17:50	1.5	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:28	1.6	23.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:28	1.6	33.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:03	1.7	24.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
D-06/23/76	19:03	1.7	33.0	-9999.	10.65	0.0	0.0	93.9	0.0	93.9

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	1.9	24.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
D-06/23/76	19:42	1.9	33.0	-9999.	10.03	0.0	0.0	398.7	0.0	398.7
I-06/23/76	20:20	2.0	24.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/23/76	20:20	2.0	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:02	2.1	24.0	-9999.	10.16	0.0	0.0	492.0	0.0	492.0
D-06/23/76	21:03	2.1	34.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3
I-06/23/76	21:48	2.2	23.9	149.	10.29	0.0	0.0	1068.6	0.0	1068.6
D-06/23/76	21:48	2.2	33.0	-9999.	9.95	0.0	0.0	1105.8	0.0	1105.8
I-06/23/76	22:26	2.2	24.0	-9999.	10.47	0.0	0.0	764.1	0.0	764.1
D-06/23/76	22:26	2.2	33.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
I-06/23/76	23:06	2.2	24.0	-9999.	10.38	0.0	0.0	481.6	0.0	481.6
D-06/23/76	23:06	2.2	33.0	-9999.	9.82	0.0	0.0	814.7	0.0	814.7
I-06/23/76	23:43	2.1	24.0	-9999.	10.16	0.0	0.0	688.8	0.0	688.8
D-06/23/76	23:43	2.1	33.0	-9999.	9.78	0.0	0.0	716.0	0.0	716.0
I-06/24/76	00:19	2.0	24.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3
D-06/24/76	00:19	2.0	33.0	-9999.	10.03	0.0	0.0	1495.0	0.0	1495.0
I-06/24/76	00:59	1.8	24.0	-9999.	10.21	0.0	0.0	1175.7	0.0	1175.7
D-06/24/76	00:59	1.8	33.0	-9999.	10.08	0.0	0.0	397.0	0.0	397.0
I-06/24/76	01:38	1.7	23.3	148.	9.86	0.0	0.0	1825.2	0.0	1825.2
D-06/24/76	01:38	1.7	33.0	-9999.	9.95	0.0	0.0	2312.2	0.0	2312.2
I-06/24/76	17:45	1.3	23.7	156.	10.12	0.0	0.0	197.6	0.0	197.6
D-06/24/76	17:45	1.3	33.0	-9999.	9.99	0.0	0.0	300.3	0.0	300.3
I-06/24/76	18:25	1.4	24.0	-9999.	10.47	0.0	0.0	95.5	0.0	95.5
D-06/24/76	18:25	1.4	33.0	-9999.	10.12	0.0	0.0	296.4	0.0	296.4
I-06/24/76	19:09	1.6	24.0	-9999.	10.65	0.0	0.0	281.7	0.0	281.7
D-06/24/76	19:09	1.6	33.0	-9999.	10.12	0.0	0.0	197.6	0.0	197.6
I-06/24/76	19:54	1.8	24.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:54	1.8	34.0	-9999.	10.16	0.0	0.0	295.2	0.0	295.2
I-06/24/76	20:35	1.9	24.0	-9999.	10.51	0.0	0.0	190.2	0.0	190.2
D-06/24/76	20:35	1.9	34.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	1.9	24.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
D-06/23/76	19:42	1.9	33.0	-9999.	10.03	0.0	0.0	398.7	0.0	398.7
I-06/23/76	20:20	2.0	24.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/23/76	20:20	2.0	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:02	2.1	24.0	-9999.	10.16	0.0	0.0	492.0	0.0	492.0
D-06/23/76	21:03	2.1	34.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3
I-06/23/76	21:48	2.2	23.9	149.	10.29	0.0	0.0	1068.6	0.0	1068.6
D-06/23/76	21:48	2.2	33.0	-9999.	9.95	0.0	0.0	1105.8	0.0	1105.8
I-06/23/76	22:26	2.2	24.0	-9999.	10.47	0.0	0.0	764.1	0.0	764.1
D-06/23/76	22:26	2.2	33.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
I-06/23/76	23:06	2.2	24.0	-9999.	10.38	0.0	0.0	481.6	0.0	481.6
D-06/23/76	23:06	2.2	33.0	-9999.	9.82	0.0	0.0	814.7	0.0	814.7
I-06/23/76	23:43	2.1	24.0	-9999.	10.16	0.0	0.0	688.8	0.0	688.8
D-06/23/76	23:43	2.1	33.0	-9999.	9.78	0.0	0.0	716.0	0.0	716.0
I-06/24/76	00:19	2.0	24.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3
D-06/24/76	00:19	2.0	33.0	-9999.	10.03	0.0	0.0	1495.0	0.0	1495.0
I-06/24/76	00:59	1.8	24.0	-9999.	10.21	0.0	0.0	1175.7	0.0	1175.7
D-06/24/76	00:59	1.8	33.0	-9999.	10.08	0.0	0.0	397.0	0.0	397.0
I-06/24/76	01:38	1.7	23.3	148.	9.86	0.0	0.0	1825.2	0.0	1825.2
D-06/24/76	01:38	1.7	33.0	-9999.	9.95	0.0	0.0	2312.2	0.0	2312.2
I-06/24/76	17:45	1.3	23.7	156.	10.12	0.0	0.0	197.6	0.0	197.6
D-06/24/76	17:45	1.3	33.0	-9999.	9.99	0.0	0.0	300.3	0.0	300.3
I-06/24/76	18:25	1.4	24.0	-9999.	10.47	0.0	0.0	95.5	0.0	95.5
D-06/24/76	18:25	1.4	33.0	-9999.	10.12	0.0	0.0	296.4	0.0	296.4
I-06/24/76	19:09	1.6	24.0	-9999.	10.65	0.0	0.0	281.7	0.0	281.7
D-06/24/76	19:09	1.6	33.0	-9999.	10.12	0.0	0.0	197.6	0.0	197.6
I-06/24/76	19:54	1.8	24.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:54	1.8	34.0	-9999.	10.16	0.0	0.0	295.2	0.0	295.2
I-06/24/76	20:35	1.9	24.0	-9999.	10.51	0.0	0.0	190.2	0.0	190.2
D-06/24/76	20:35	1.9	34.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1

I=INTAKE, D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	21:19	2.1	24.0	-9999.	10.38	0.0	0.0	1059.5	0.0	1059.5
D-06/24/76	21:19	2.1	34.0	-9999.	10.08	0.0	0.0	297.7	0.0	297.7
I-06/24/76	22:02	2.1	24.1	155.	10.65	0.0	0.0	1220.9	0.0	1220.9
D-06/24/76	22:02	2.1	34.0	-9999.	10.08	0.0	0.0	2084.0	0.0	2084.0
I-06/24/76	22:44	2.2	24.0	-9999.	10.65	0.0	0.0	375.7	0.0	375.7
D-06/24/76	22:44	2.2	34.0	-9999.	9.99	0.0	0.0	700.7	0.0	700.7
I-06/24/76	23:22	2.1	25.0	-9999.	10.47	0.0	0.0	477.6	0.0	477.6
D-06/24/76	23:22	2.1	35.0	-9999.	9.69	0.0	0.0	206.4	0.0	206.4
I-06/25/76	00:01	2.1	24.0	-9999.	9.86	0.0	0.0	1318.2	0.0	1318.2
D-06/25/76	00:01	2.1	34.0	-9999.	9.57	0.0	0.0	1463.5	0.0	1463.5
I-06/24/76	00:42	2.0	24.0	-9999.	10.65	0.0	0.0	2254.0	0.0	2254.0
D-06/25/76	00:42	2.0	33.0	-9999.	9.57	0.0	0.0	1568.0	0.0	1568.0
I-06/25/76	01:20	1.9	24.0	-9999.	10.60	0.0	0.0	1414.7	0.0	1414.7
D-06/25/76	01:20	1.9	32.0	-9999.	10.03	0.0	0.0	697.7	0.0	697.7
I-06/25/76	01:59	1.7	23.7	153.	10.03	0.0	0.0	1196.0	0.0	1196.0
D-06/25/76	01:59	1.7	33.0	-9999.	9.86	0.0	0.0	1521.0	0.0	1521.0
I-06/28/76	17:39	1.4	25.6	172.	9.90	0.0	0.0	101.0	0.0	101.0
D-06/28/76	17:39	1.4	26.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
I-06/28/76	18:20	1.3	25.5	-9999.	10.08	0.0	0.0	397.0	0.0	397.0
D-06/28/76	18:20	1.3	26.0	-9999.	9.90	0.0	0.0	201.9	0.0	201.9
I-06/28/76	19:03	1.2	25.5	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
D-06/28/76	19:03	1.2	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:45	1.6	25.5	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
D-06/28/76	19:45	1.2	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:20	1.3	25.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/28/76	21:30	1.6	24.0	-9999.	10.38	0.0	0.0	96.3	0.0	96.3
D-06/28/76	21:30	1.6	25.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
I-06/28/76	22:06	1.8	24.6	168.	10.38	0.0	0.0	192.6	0.0	192.6
D-06/28/76	22:06	1.8	25.0	-9999.	10.34	0.0	0.0	96.7	0.0	96.7
I-06/28/76	22:51	2.0	24.6	-9999.	10.60	0.0	0.0	188.6	0.0	188.6

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/28/76	22:51	2.0	25.0	-9999.	10.34	0.0	0.0	483.6	0.0	483.6
I-06/28/76	23:38	2.1	24.6	-9999.	10.47	0.0	0.0	286.5	0.0	286.5
D-06/28/76	23:38	2.1	26.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
I-06/29/76	00:19	2.2	24.5	-9999.	10.34	0.0	0.0	193.5	193.5	387.0
D-06/28/76	00:19	2.2	26.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
I-06/29/76	01:04	2.3	24.5	-9999.	10.38	0.0	0.0	192.6	0.0	192.6
D-06/29/76	01:04	2.3	27.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
I-06/29/76	01:43	2.3	24.9	166.	9.82	0.0	0.0	0.0	0.0	0.0
D-06/29/76	01:43	2.3	28.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/29/76	17:50	1.5	25.2	178.	9.95	0.0	0.0	301.6	0.0	301.6
D-06/29/76	17:50	1.5	34.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
I-06/29/76	18:55	1.4	25.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
D-06/29/76	18:55	1.4	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/29/76	19:36	1.3	25.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/29/76	19:36	1.3	34.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
I-06/29/76	20:23	1.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:23	1.2	27.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/29/76	21:03	1.3	25.0	-9999.	9.86	0.0	0.0	202.8	0.0	202.8
D-06/29/76	21:03	1.3	33.0	-9999.	10.34	0.0	0.0	290.2	0.0	290.2
I-06/29/76	22:16	1.6	25.0	194.	10.65	0.0	0.0	187.8	0.0	187.8
D-06/29/76	22:16	1.6	31.5	-9999.	7.30	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:56	1.9	25.0	-9999.	9.78	0.0	0.0	306.9	0.0	306.9
D-06/29/76	22:56	1.9	32.0	-9999.	9.82	0.0	0.0	203.7	0.0	203.7
I-06/29/76	23:45	2.1	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-06/29/76	23:44	2.1	31.5	-9999.	8.48	0.0	0.0	353.8	0.0	353.8
I-06/30/76	00:26	2.2	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-06/30/76	00:26	2.2	31.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-06/30/76	01:08	2.3	25.0	-9999.	10.51	0.0	0.0	285.3	95.1	380.4
D-06/30/76	01:08	2.3	30.5	-9999.	7.39	0.0	0.0	135.3	0.0	135.3
I-06/30/76	01:47	2.3	25.2	211.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/30/76	01:47	2.3	29.5	-9999.	10.43	0.0	0.0	95.9	0.0	95.9
I-06/30/76	17:35	1.9	25.4	177.	12.82	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:35	1.9	35.0	-9999.	10.08	0.0	0.0	595.4	0.0	595.4
I-06/30/76	18:26	1.7	25.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
D-06/30/76	18:26	1.7	35.0	-9999.	8.25	0.0	0.0	242.4	0.0	242.4
I-06/30/76	19:05	1.6	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-06/30/76	19:05	1.6	35.0	-9999.	9.66	0.0	0.0	0.0	0.0	0.0
I-06/30/76	19:52	1.5	25.0	-9999.	11.99	0.0	0.0	0.0	0.0	0.0
D-06/30/76	19:52	1.5	35.0	-9999.	7.45	0.0	0.0	0.0	0.0	0.0
I-06/30/76	20:37	1.4	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-06/30/76	20:37	1.4	35.0	-9999.	9.90	0.0	0.0	201.9	0.0	201.9
I-06/30/76	21:26	1.5	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:26	1.5	35.0	-9999.	9.41	0.0	0.0	106.3	0.0	106.3
I-06/30/76	22:08	1.6	24.1	184.	10.60	0.0	0.0	377.2	0.0	377.2
D-06/30/76	22:08	1.6	35.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
I-06/30/76	23:02	1.8	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:02	1.8	35.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:42	2.0	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:42	2.0	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/01/76	00:30	2.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/01/76	00:30	2.2	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/01/76	01:11	2.3	25.0	-9999.	10.03	0.0	0.0	199.3	0.0	199.3
D-07/01/76	01:11	2.3	33.0	-9999.	10.25	0.0	0.0	97.6	0.0	97.6
I-07/01/76	01:57	2.4	25.0	184.	10.21	0.0	0.0	98.0	0.0	98.0
D-07/01/76	01:57	2.4	31.5	-9999.	8.47	0.0	0.0	118.1	0.0	118.1
I-07/01/76	17:23	2.1	26.0	200.	10.43	0.0	0.0	191.8	0.0	191.8
D-07/01/76	17:23	2.1	34.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/01/76	18:06	1.9	25.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
D-07/01/76	18:06	1.9	34.0	-9999.	8.75	0.0	0.0	114.3	0.0	114.3
I-07/01/76	18:51	1.8	25.0	-9999.	10.21	0.0	0.0	685.8	0.0	685.8

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/01/76	18:51	1.8	34.0	-9999.	9.82	0.0	0.0	203.7	0.0	203.7
I-07/01/76	19:39	1.7	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:39	1.7	34.0	-9999.	9.07	0.0	0.0	0.0	0.0	0.0
I-07/01/76	20:18	1.6	25.0	-9999.	9.86	0.0	0.0	202.8	0.0	202.8
D-07/01/76	20:18	1.6	34.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:03	1.5	26.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-07/01/76	21:03	1.5	34.0	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:44	1.5	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:44	1.5	34.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-07/01/76	22:40	1.5	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:40	1.5	34.0	-9999.	9.35	0.0	0.0	0.0	107.0	107.0
I-07/01/76	23:20	1.6	25.3	191.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:20	1.6	32.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:10	1.8	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:10	1.8	32.0	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/02/76	01:00	2.0	25.0	-9999.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/02/76	01:00	2.0	31.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/02/76	02:10	2.2	25.3	189.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/02/76	01:50	2.2	29.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:30	1.9	27.2	219.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:30	1.9	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:30	2.0	27.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:30	2.0	36.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:23	2.2	27.0	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:23	2.2	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:10	2.3	27.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:10	2.3	36.5	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:52	2.3	27.5	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:52	2.3	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:45	2.2	27.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/06/76	21:45	2.2	36.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	22:35	2.0	26.5	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/06/76	22:35	2.0	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	23:32	1.8	26.4	209.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/06/76	23:32	1.8	34.0	-9999.	10.46	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:17	1.7	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:17	1.7	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:10	1.5	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/07/76	01:10	1.5	33.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:58	1.4	26.2	207.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/07/76	01:58	1.4	33.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/07/76	17:30	1.7	25.9	201.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:30	1.7	31.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:08	2.1	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:08	2.1	31.0	-9999.	8.70	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:50	2.2	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:50	2.2	31.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:02	2.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:02	2.4	31.0	-9999.	8.19	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:55	2.4	26.5	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:55	2.4	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/07/76	22:45	2.3	26.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/07/76	22:45	2.3	31.0	-9999.	8.51	0.0	0.0	0.0	0.0	0.0
I-07/07/76	23:36	2.1	26.5	203.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:36	2.1	32.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
I-07/08/76	00:29	1.9	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:29	1.9	32.0	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:09	1.8	26.0	-9999.	9.78	0.0	0.0	0.0	102.3	102.3
D-07/08/76	01:09	1.8	29.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:57	1.6	25.1	202.	9.99	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/08/76	01:57	1.6	29.0	-9999.	9.23	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:31	1.3	24.9	200.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:31	1.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:25	1.6	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:25	1.6	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:06	1.8	25.5	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:06	1.8	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:48	2.0	25.5	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:48	2.0	31.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:28	2.1	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/08/76	20:28	2.1	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:12	2.2	25.1	203.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/08/76	21:12	2.2	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:57	2.3	26.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:57	2.3	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	22:40	2.3	26.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/08/76	22:40	2.3	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:23	2.3	26.5	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:23	2.3	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:00	2.2	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:00	2.2	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:47	2.0	26.0	-9999.	10.03	0.0	0.0	0.0	398.7	398.7
D-07/09/76	00:47	2.0	33.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
I-07/09/76	01:29	1.9	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/09/76	01:29	1.9	33.0	-9999.	9.78	0.0	0.0	0.0	102.3	102.3
I-07/09/76	02:07	1.8	25.2	205.	10.16	0.0	0.0	0.0	98.4	98.4
D-07/09/76	02:07	1.8	30.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:34	1.4	25.4	204.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:34	1.4	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:15	1.3	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/12/76	18:15	1.3	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:56	1.2	26.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:56	1.2	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:34	1.2	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:34	1.2	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:10	1.2	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:10	1.2	35.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:49	1.3	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:49	1.3	35.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/12/76	21:31	1.5	25.5	-9999.	10.56	0.0	0.0	0.0	189.4	189.4
D-07/12/76	21:31	1.5	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/12/76	22:12	1.7	24.4	191.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/12/76	22:12	1.7	33.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
I-07/12/76	22:49	1.9	25.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
D-07/12/76	22:49	1.9	32.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
I-07/12/76	23:31	2.0	25.5	-9999.	10.21	0.0	0.0	98.0	195.9	293.9
D-07/12/76	23:31	2.0	32.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/13/76	00:12	2.1	25.5	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:12	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/13/76	00:54	2.2	25.5	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:54	2.2	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	01:30	2.3	25.5	-9999.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	01:30	2.3	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	02:10	2.3	25.5	198.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	02:10	2.3	30.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:36	1.6	24.7	190.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:36	1.6	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:12	1.5	25.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:12	1.5	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:52	1.4	25.5	-9999.	9.82	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/13/76	18:52	1.4	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:30	1.3	25.5	-9999.	9.57	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:30	1.3	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:05	1.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:05	1.2	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:45	1.2	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:45	1.2	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/13/76	21:21	1.2	25.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:21	1.3	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:00	1.4	24.2	184.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:00	1.4	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:42	1.7	25.0	-9999.	9.86	0.0	0.0	0.0	101.4	101.4
D-07/13/76	22:42	1.7	32.0	-9999.	10.38	0.0	0.0	0.0	192.6	192.6
I-07/13/76	23:19	1.9	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:19	1.9	32.0	-9999.	9.78	0.0	0.0	102.3	0.0	102.3
I-07/13/76	23:56	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:56	2.0	32.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:34	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:34	2.1	31.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:11	2.2	25.0	-9999.	10.38	0.0	0.0	0.0	96.3	96.3
D-07/14/76	01:11	2.2	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:48	2.3	24.3	187.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:48	2.3	31.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:33	1.8	24.8	187.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:33	1.8	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:09	1.7	25.5	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:09	1.7	36.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-07/14/76	18:49	1.6	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:49	1.6	35.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:28	1.5	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/14/76	19:28	1.5	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:06	1.4	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:06	1.4	35.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:42	1.3	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:42	1.3	35.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:26	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:26	1.3	35.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:00	1.3	24.2	179.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/14/76	22:00	1.3	35.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:39	1.4	25.0	-9999.	10.16	0.0	0.0	0.0	98.4	98.4
D-07/14/76	22:39	1.4	35.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:16	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:16	1.5	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:57	1.8	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:57	1.8	34.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:34	1.9	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:34	1.9	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	01:15	2.0	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/15/76	01:15	2.0	32.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/15/76	01:53	2.1	24.3	183.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/15/76	01:53	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:59	1.9	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:59	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:38	1.7	25.7	189.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:38	1.7	36.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
I-07/15/76	19:19	1.6	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:19	1.6	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	1.5	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	1.5	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:35	1.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/15/76	20:35	1.4	36.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:13	1.3	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:13	1.3	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:53	1.3	25.0	181.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:53	1.3	35.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:32	1.3	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:32	1.3	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:10	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:10	1.4	35.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:46	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:46	1.5	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:40	1.8	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:40	1.8	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:20	1.9	25.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/16/76	01:20	1.9	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:55	2.0	25.0	181.	10.60	0.0	0.0	0.0	94.3	94.3
D-07/16/76	01:55	2.0	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/19/76	17:30	1.9	26.0	177.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	17:30	1.9	36.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:08	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:08	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:47	2.0	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:47	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/19/76	19:23	2.0	26.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/19/76	19:23	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
I-07/19/76	20:01	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:01	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:40	1.9	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:40	1.9	36.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	21:23	1.8	25.0	177.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/19/76	21:23	1.8	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/19/76	22:00	1.7	25.0	-9999.	10.03	0.0	0.0	0.0	299.0	299.0
D-07/19/76	22:00	1.7	35.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	22:38	1.6	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/19/76	22:38	1.6	36.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
I-07/19/76	23:18	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	100.1	100.1
D-07/19/76	23:18	1.5	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	23:57	1.4	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/19/76	23:57	1.4	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/20/76	00:35	1.3	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/20/76	00:35	1.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/20/76	01:10	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	301.6	301.6
D-07/20/76	01:10	1.3	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/20/76	01:54	1.3	25.0	175.	10.12	0.0	0.0	0.0	197.6	197.6
D-07/20/76	01:54	1.3	31.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/20/76	17:32	1.8	26.0	183.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/20/76	17:32	1.8	37.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:10	1.9	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/20/76	18:10	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:45	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	18:45	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/20/76	19:25	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	19:25	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:04	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/20/76	20:04	2.0	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:43	2.0	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/20/76	20:43	2.0	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:20	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/20/76	21:20	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:59	1.9	25.0	185.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/20/76	21:59	1.9	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	22:51	1.8	26.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/20/76	22:51	1.8	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	23:33	1.6	26.0	-9999.	9.90	0.0	0.0	0.0	302.9	302.9
D-07/20/76	23:33	1.6	35.0	-9999.	9.17	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:15	1.6	25.0	-9999.	10.21	0.0	0.0	0.0	293.9	293.9
D-07/21/76	00:15	1.6	32.0	-9999.	10.25	0.0	0.0	0.0	195.1	195.1
I-07/21/76	00:53	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	100.1	100.1
D-07/21/76	00:53	1.5	31.0	-9999.	9.07	0.0	0.0	0.0	0.0	0.0
I-07/21/76	01:33	1.4	25.0	-9999.	9.90	0.0	0.0	0.0	101.0	101.0
D-07/21/76	01:33	1.4	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/21/76	02:11	1.4	25.4	191.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/21/76	02:11	1.4	31.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
I-07/21/76	17:29	1.7	25.0	177.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	17:29	1.7	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:06	1.8	25.5	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/21/76	18:06	1.8	36.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:52	1.9	26.0	-9999.	10.38	0.0	0.0	0.0	96.3	96.3
D-07/21/76	18:52	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/21/76	19:30	2.0	26.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	19:30	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:06	2.0	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/21/76	20:06	2.0	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:44	2.0	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/21/76	20:44	2.0	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	21:23	2.0	25.9	183.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/21/76	21:23	2.0	36.0	-9999.	9.78	0.0	0.0	0.0	102.3	102.3
I-07/21/76	22:04	2.0	25.5	-9999.	10.12	0.0	0.0	0.0	296.4	296.4
D-07/21/76	22:04	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	22:43	1.9	25.5	-9999.	10.21	0.0	0.0	0.0	195.9	195.9

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/21/76	22:43	1.9	36.0	-9999.	9.73	0.0	0.0	0.0	102.7	102.7
I-07/21/76	23:25	1.7	26.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
D-07/21/76	23:25	1.7	36.0	-9999.	9.86	0.0	0.0	0.0	202.8	202.8
I-07/21/76	23:55	1.7	25.0	-9999.	9.65	0.0	0.0	0.0	518.1	518.1
D-07/21/76	23:53	1.7	35.0	-9999.	9.66	0.0	0.0	0.0	103.5	103.5
I-07/21/76	00:34	1.5	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/22/76	00:34	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
I-07/22/76	01:10	1.5	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	01:10	1.5	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/22/76	01:50	1.4	25.0	198.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/22/76	01:50	1.4	33.0	-9999.	9.86	0.0	0.0	0.0	101.4	101.4
I-07/22/76	17:24	1.5	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	17:24	1.5	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:01	1.7	25.0	179.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:01	1.7	36.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:46	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:46	1.9	37.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:22	2.0	26.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:22	2.0	37.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:59	2.1	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:59	2.1	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/22/76	20:38	2.1	26.5	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
D-07/22/76	20:38	2.1	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:16	2.2	27.0	-9999.	10.29	0.0	0.0	0.0	97.1	97.1
D-07/22/76	21:16	2.2	36.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:55	2.3	27.0	187.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:55	2.3	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	22:31	2.2	27.0	-9999.	10.03	0.0	0.0	0.0	99.7	99.7
D-07/22/76	22:31	2.2	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/22/76	23:07	2.1	26.0	-9999.	10.08	0.0	0.0	0.0	198.5	198.5

I=INTAKE; D=DISCHARGE

: WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/22/76	23:07	2.1	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	23:47	2.0	26.0	-9999.	10.06	0.0	0.0	0.0	397.5	397.5
D-07/22/76	23:47	2.0	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/23/76	00:33	1.9	26.0	-9999.	10.29	0.0	0.0	0.0	194.2	194.2
D-07/23/76	00:33	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	202.0	202.0
I-07/23/76	01:11	1.8	26.0	-9999.	9.69	0.0	0.0	0.0	619.1	619.1
D-07/23/76	01:11	1.8	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:53	1.6	25.0	182.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:53	1.6	33.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/26/76	17:32	1.2	26.0	178.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:32	1.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:13	1.2	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:13	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:52	1.2	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:52	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:30	1.2	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:30	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:11	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:11	1.5	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:51	1.7	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:51	1.7	33.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-07/26/76	21:27	1.9	25.3	174.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/26/76	21:27	1.9	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:07	2.0	25.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
D-07/26/76	22:07	2.0	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:45	2.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:45	2.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	23:25	2.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/26/76	23:25	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:05	2.4	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/27/76	00:05	2.4	33.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:45	2.4	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/27/76	00:45	2.4	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/27/76	01:25	2.3	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/27/76	01:25	2.3	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/27/76	02:05	2.2	25.4	177.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/27/76	02:05	2.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/27/76	17:38	1.3	26.0	178.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/27/76	17:38	1.3	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:16	1.2	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:16	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:54	1.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:54	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	19:37	1.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:37	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:13	1.2	25.0	-9999.	10.35	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:13	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:53	1.5	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:53	1.5	32.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/27/76	21:33	1.8	25.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
D-07/27/76	21:33	1.8	32.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:13	1.9	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/27/76	22:13	1.9	32.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:53	2.0	25.0	173.	9.99	0.0	0.0	0.0	100.1	100.1
D-07/27/76	22:53	2.0	32.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/27/76	23:25	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:25	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:05	2.3	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/28/76	00:05	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:45	2.3	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/28/76	00:45	2.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/28/76	01:25	2.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	01:25	2.3	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/28/76	02:01	2.3	25.0	176.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	02:01	2.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:32	1.5	26.3	177.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	17:32	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:08	1.4	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:08	1.4	33.0	-9999.	9.61	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:48	1.3	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:48	1.3	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:26	1.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:26	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:05	1.2	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:05	1.2	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:42	1.2	25.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:42	1.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:22	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/28/76	21:22	1.4	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:01	1.6	25.0	169.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:01	1.6	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:39	1.8	25.0	-9999.	10.38	0.0	0.0	0.0	96.3	96.3
D-07/28/76	22:39	1.8	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:12	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
D-07/28/76	23:12	2.0	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:50	2.1	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:50	2.1	34.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:25	2.2	25.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/29/76	00:25	2.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:05	2.3	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/29/76	01:05	2.3	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:42	2.3	26.0	177.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/29/76	01:42	2.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	17:38	1.7	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/29/76	17:38	1.7	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:11	1.6	25.4	172.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:11	1.6	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:51	1.5	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:51	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:30	1.4	25.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:30	1.4	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:13	1.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:12	1.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:45	1.3	25.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:45	1.3	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/29/76	21:25	1.3	25.1	170.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/29/76	21:25	1.3	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/29/76	22:45	1.7	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/29/76	22:45	1.7	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/29/76	23:25	1.9	25.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:25	1.9	33.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
I-07/30/76	00:15	2.1	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:15	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:54	2.2	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:54	2.2	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/30/76	01:31	2.3	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/30/76	01:31	2.3	32.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/30/76	02:08	2.3	25.2	172.	10.43	0.0	0.0	0.0	95.9	95.9
D-07/30/76	02:08	2.3	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	23:47	1.7	19.5	129.	10.16	0.0	0.0	0.0	0.0	0.0
D-06/14/76	23:47	1.7	27.0	-9999.	7.98	0.0	0.0	0.0	0.0	0.0
I-06/15/76	01:38	2.1	19.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/15/76	01:38	2.1	24.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
I-06/15/76	17:52	1.7	20.4	132.	10.08	0.0	0.0	198.5	0.0	198.5
D-06/15/76	17:52	1.7	30.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
I-06/15/76	19:14	1.4	20.0	-9999.	10.38	0.0	0.0	96.3	0.0	96.3
I-06/15/76	21:35	1.2	20.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/15/76	21:35	1.2	27.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-06/15/76	22:46	1.2	18.7	132.	10.25	0.0	0.0	0.0	0.0	0.0
D-06/15/76	22:46	1.2	27.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
I-06/16/76	00:09	1.6	20.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:09	1.6	27.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/15/76	01:18	1.9	19.7	135.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/16/76	01:18	1.9	26.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-06/16/76	17:48	2.0	20.9	134.	10.29	0.0	0.0	194.3	0.0	194.3
D-06/16/76	17:48	2.0	33.0	-9999.	6.63	0.0	0.0	150.9	0.0	150.9
I-06/16/76	19:12	1.7	21.0	-9999.	10.83	0.0	0.0	0.0	0.0	0.0
D-06/16/76	19:12	1.7	33.0	-9999.	10.92	0.0	0.0	91.6	0.0	91.6
I-06/16/76	20:18	1.5	21.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/16/76	20:18	1.5	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-06/17/76	00:19	1.4	20.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/17/76	00:19	1.4	28.0	-9999.	10.25	0.0	0.0	292.7	0.0	292.7
I-06/17/76	01:52	1.9	20.7	149.	10.29	0.0	0.0	97.1	0.0	97.1
D-06/17/76	01:52	1.9	27.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/17/76	17:37	1.9	21.4	145.	10.56	0.0	0.0	0.0	0.0	0.0
D-06/17/76	17:37	1.9	35.0	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
I-06/17/76	19:19	1.7	21.0	-9999.	9.78	0.0	0.0	204.6	0.0	204.6
D-06/17/76	19:19	1.7	33.0	-9999.	8.36	0.0	0.0	0.0	0.0	0.0
D-06/17/76	20:34	1.5	33.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:21	1.3	21.6	198.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/17/76	22:21	1.3	33.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-06/18/76	00:17	1.3	21.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:17	1.3	29.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/18/76	01:24	1.5	21.5	219.	9.90	0.0	0.0	0.0	0.0	0.0
D-06/18/76	01:24	1.5	27.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-06/21/76	17:38	1.8	23.2	156.	9.99	0.0	0.0	0.0	0.0	0.0
D-06/21/76	17:38	1.8	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-06/21/76	18:26	1.9	23.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-06/21/76	18:26	1.9	33.0	-9999.	9.95	0.0	0.0	502.6	0.0	502.6
I-06/21/76	19:21	2.0	23.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:21	2.0	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-06/21/76	20:12	2.1	23.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:12	2.1	33.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-06/21/76	20:51	2.1	23.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:51	2.1	33.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/21/76	21:41	2.1	23.1	146.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/21/76	21:41	2.1	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-06/21/76	22:44	1.9	23.0	-9999.	10.12	0.0	0.0	197.6	0.0	197.6
D-06/21/76	22:44	1.9	32.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-06/21/76	23:36	1.8	22.0	-9999.	9.78	0.0	0.0	204.6	0.0	204.6
D-06/21/76	23:36	1.8	32.0	-9999.	9.69	0.0	0.0	309.5	0.0	309.5
I-06/22/76	00:24	1.6	22.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-06/22/76	00:24	1.6	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-06/22/76	01:10	1.5	22.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-06/22/76	01:10	1.5	30.0	-9999.	10.08	0.0	297.7	0.0	0.0	297.7
I-06/22/76	02:00	1.5	22.5	141.	10.25	0.0	0.0	195.1	0.0	195.1
D-06/22/76	02:00	1.5	29.0	-9999.	9.82	0.0	0.0	203.7	0.0	203.7
I-06/22/76	17:38	1.6	22.8	152.	10.43	0.0	0.0	95.9	0.0	95.9
D-06/22/76	17:38	1.6	32.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	18:21	1.8	23.0	-9999.	9.61	0.0	0.0	104.1	0.0	104.1
D-06/22/76	18:21	1.8	33.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-06/22/76	19:01	1.8	23.5	-9999.	10.56	0.0	0.0	94.7	0.0	94.7
D-06/22/76	19:01	1.8	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-06/22/76	19:42	1.9	24.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/22/76	19:42	1.9	34.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/22/76	20:22	2.0	24.0	-9999.	10.34	0.0	0.0	193.5	0.0	193.5
D-06/22/76	20:22	2.0	34.0	-9999.	9.86	0.0	101.4	304.2	0.0	405.6
I-06/22/76	21:04	2.1	24.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-06/22/76	21:04	2.1	34.0	-9999.	10.16	0.0	0.0	196.8	0.0	196.8
I-06/22/76	21:45	2.1	24.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/22/76	21:45	2.1	33.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-06/22/76	22:30	2.0	23.6	176.	10.25	0.0	0.0	390.2	0.0	390.2
D-06/22/76	22:30	2.0	33.0	-9999.	10.08	0.0	0.0	297.7	0.0	297.7
I-06/22/76	23:09	2.0	23.0	-9999.	10.60	0.0	0.0	754.5	0.0	754.5
D-06/22/76	23:09	2.0	32.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-06/22/76	23:50	1.9	23.0	-9999.	10.38	0.0	0.0	385.3	0.0	385.3
D-06/22/76	23:50	1.9	31.0	-9999.	10.08	0.0	0.0	595.4	0.0	595.4
I-06/23/76	00:29	1.7	23.0	-9999.	9.82	0.0	0.0	611.0	0.0	611.0
D-06/23/76	00:29	1.7	30.0	-9999.	9.95	0.0	0.0	1005.3	0.0	1005.3
I-06/23/76	01:09	1.6	23.0	-9999.	9.86	0.0	0.0	304.2	0.0	304.2
D-06/23/76	01:09	1.6	28.0	-9999.	10.12	0.0	0.0	395.3	0.0	395.3
I-06/23/76	02:04	1.5	23.5	187.	10.25	0.0	0.0	97.6	0.0	97.6
D-06/23/76	02:04	1.5	28.0	-9999.	10.34	0.0	0.0	193.5	0.0	193.5
I-06/23/76	17:50	1.5	23.1	152.	10.36	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:50	1.5	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:28	1.6	23.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:28	1.6	33.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:03	1.7	24.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:03	1.7	33.0	-9999.	10.65	0.0	0.0	187.8	0.0	187.8

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	1.9	24.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:42	1.9	33.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-06/23/76	20:20	2.0	24.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:20	2.0	34.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
I-06/23/76	21:02	2.1	24.0	-9999.	10.16	0.0	0.0	393.6	0.0	393.6
D-06/23/76	21:03	2.1	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:48	2.2	23.9	149.	10.29	0.0	0.0	97.1	0.0	97.1
D-06/23/76	21:48	2.2	33.0	-9999.	9.95	0.0	0.0	201.1	0.0	201.1
I-06/23/76	22:26	2.2	24.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/23/76	22:26	2.2	33.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
I-06/23/76	23:06	2.2	24.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:06	2.2	33.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:43	2.1	24.0	-9999.	10.16	0.0	0.0	196.8	0.0	196.8
D-06/23/76	23:43	2.1	33.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/24/76	00:19	2.0	24.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-06/24/76	00:19	2.0	33.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-06/24/76	00:59	1.8	24.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
D-06/24/76	00:59	1.8	33.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-06/24/76	01:38	1.7	23.3	148.	9.86	0.0	0.0	101.4	0.0	101.4
D-06/24/76	01:38	1.7	33.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
I-06/24/76	17:45	1.3	23.7	156.	10.12	0.0	0.0	98.8	0.0	98.8
D-06/24/76	17:45	1.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-06/24/76	18:25	1.4	24.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:25	1.4	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:09	1.6	24.0	-9999.	10.65	0.0	0.0	93.9	0.0	93.9
D-06/24/76	19:09	1.6	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:54	1.8	24.0	-9999.	10.43	0.0	0.0	191.8	95.9	287.7
D-06/24/76	19:54	1.8	34.0	-9999.	10.16	0.0	0.0	0.0	196.8	196.8
I-06/24/76	20:35	1.9	24.0	-9999.	10.51	0.0	0.0	0.0	95.1	95.1
D-06/24/76	20:35	1.9	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	21:19	2.1	24.0	-9999.	10.38	0.0	0.0	192.6	192.6	385.2
D-06/24/76	21:19	2.1	34.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
I-06/24/76	22:02	2.1	24.1	155.	10.65	0.0	0.0	187.8	93.9	281.7
D-06/24/76	22:02	2.1	34.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
I-06/24/76	22:44	2.2	24.0	-9999.	10.65	0.0	0.0	187.8	93.9	281.7
D-06/24/76	22:44	2.2	34.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
I-06/24/76	23:22	2.1	25.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:22	2.1	35.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
I-06/25/76	00:01	2.1	24.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:01	2.1	34.0	-9999.	9.57	0.0	0.0	209.1	0.0	209.1
I-06/24/76	00:42	2.0	24.0	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:42	2.0	33.0	-9999.	9.57	0.0	0.0	0.0	0.0	0.0
I-06/25/76	01:20	1.9	24.0	-9999.	10.60	0.0	0.0	94.3	0.0	94.3
D-06/25/76	01:20	1.9	32.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-06/25/76	01:59	1.7	23.7	153.	10.03	0.0	0.0	299.0	0.0	299.0
D-06/25/76	01:59	1.7	33.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
I-06/28/76	17:39	1.4	25.6	172.	9.90	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:39	1.4	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:20	1.3	25.5	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:20	1.3	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:03	1.2	25.5	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:03	1.2	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:45	1.6	25.5	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:45	1.2	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:20	1.3	25.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-06/28/76	21:30	1.6	24.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-06/28/76	21:30	1.6	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/28/76	22:06	1.8	24.6	168.	10.38	0.0	0.0	0.0	0.0	0.0
D-06/28/76	22:06	1.8	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-06/28/76	22:51	2.0	24.6	-9999.	10.60	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/28/76	22:51	2.0	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-06/28/76	23:38	2.1	24.6	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:38	2.1	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/29/76	00:19	2.2	24.5	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-06/28/76	00:19	2.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-06/29/76	01:04	2.3	24.5	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-06/29/76	01:04	2.3	27.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/29/76	01:43	2.3	24.9	166.	9.82	0.0	0.0	101.8	0.0	101.8
D-06/29/76	01:43	2.3	28.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/29/76	17:50	1.5	25.2	178.	9.95	0.0	0.0	0.0	0.0	0.0
D-06/29/76	17:50	1.5	34.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-06/29/76	18:55	1.4	25.0	-9999.	9.86	0.0	0.0	202.8	0.0	202.8
D-06/29/76	18:55	1.4	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/29/76	19:36	1.3	25.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-06/29/76	19:36	1.3	34.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:23	1.2	25.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
D-06/29/76	20:23	1.2	27.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/29/76	21:03	1.3	25.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-06/29/76	21:03	1.3	33.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
I-06/29/76	22:16	1.6	25.0	194.	10.65	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:16	1.6	31.5	-9999.	7.30	0.0	0.0	137.0	0.0	137.0
I-06/29/76	22:56	1.9	25.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:56	1.9	32.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-06/29/76	23:45	2.1	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-06/29/76	23:44	2.1	31.5	-9999.	8.48	0.0	0.0	117.9	0.0	117.9
I-06/30/76	00:26	2.2	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-06/30/76	00:26	2.2	31.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-06/30/76	01:08	2.3	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-06/30/76	01:08	2.3	30.5	-9999.	7.39	0.0	0.0	0.0	0.0	0.0
I-06/30/76	01:47	2.3	25.2	211.	10.12	0.0	0.0	197.6	0.0	197.6

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-06/30/76	01:47	2.3	29.5	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-06/30/76	17:35	1.9	25.4	177.	12.82	0.0	0.0	156.0	0.0	156.0
D-06/30/76	17:35	1.9	35.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-06/30/76	18:26	1.7	25.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-06/30/76	18:26	1.7	35.0	-9999.	8.25	0.0	0.0	121.2	0.0	121.2
I-06/30/76	19:05	1.6	25.0	-9999.	10.03	0.0	0.0	299.0	0.0	299.0
D-06/30/76	19:05	1.6	35.0	-9999.	9.66	0.0	0.0	103.5	0.0	103.5
I-06/30/76	19:52	1.5	25.0	-9999.	11.99	0.0	0.0	0.0	0.0	0.0
D-06/30/76	19:52	1.5	35.0	-9999.	7.45	0.0	0.0	0.0	0.0	0.0
I-06/30/76	20:37	1.4	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-06/30/76	20:37	1.4	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:26	1.5	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:26	1.5	35.0	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:08	1.6	24.1	184.	10.60	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:08	1.6	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:02	1.8	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:02	1.8	35.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:42	2.0	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:42	2.0	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/01/76	00:30	2.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/01/76	00:30	2.2	34.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/01/76	01:11	2.3	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/01/76	01:11	2.3	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/01/76	01:57	2.4	25.0	184.	10.21	0.0	0.0	98.0	98.0	196.0
D-07/01/76	01:57	2.4	31.5	-9999.	8.47	0.0	0.0	0.0	0.0	0.0
I-07/01/76	17:23	2.1	26.0	200.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:23	2.1	34.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/01/76	18:06	1.9	25.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
D-07/01/76	18:06	1.9	34.0	-9999.	8.75	0.0	0.0	114.3	0.0	114.3
I-07/01/76	18:51	1.8	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/01/76	18:51	1.8	34.0	-9999.	9.82	0.0	0.0	101.8	0.0	101.8
I-07/01/76	19:39	1.7	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:39	1.7	34.0	-9999.	9.07	0.0	0.0	110.3	0.0	110.3
I-07/01/76	20:18	1.6	25.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
D-07/01/76	20:18	1.6	34.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:03	1.5	26.0	-9999.	10.03	0.0	0.0	99.7	0.0	99.7
D-07/01/76	21:03	1.5	34.0	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:44	1.5	25.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-07/01/76	21:44	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/01/76	22:40	1.5	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:40	1.5	34.0	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:20	1.6	25.3	191.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:20	1.6	32.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:10	1.8	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:10	1.8	32.0	-9999.	9.35	0.0	0.0	107.0	0.0	107.0
I-07/02/76	01:00	2.0	25.0	-9999.	10.69	0.0	0.0	93.5	0.0	93.5
D-07/02/76	01:00	2.0	31.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/02/76	02:10	2.2	25.3	189.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/02/76	01:50	2.2	29.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:30	1.9	27.2	219.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:30	1.9	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:30	2.0	27.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:30	2.0	36.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:23	2.2	27.0	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:23	2.2	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:10	2.3	27.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:10	2.3	36.5	-9999.	9.41	0.0	0.0	0.0	106.3	106.3
I-07/06/76	20:52	2.3	27.5	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:52	2.3	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:45	2.2	27.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/06/76	21:45	2.2	36.5	-9999.	9.35	0.0	0.0	107.0	0.0	107.0
I-07/06/76	22:35	2.0	26.5	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/06/76	22:35	2.0	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	23:32	1.8	26.4	209.	9.86	0.0	0.0	101.4	0.0	101.4
D-07/06/76	23:32	1.8	34.0	-9999.	10.46	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:17	1.7	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:17	1.7	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:10	1.5	26.0	-9999.	9.86	0.0	0.0	101.4	0.0	101.4
D-07/07/76	01:10	1.5	33.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:58	1.4	26.2	207.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/07/76	01:58	1.4	33.0	-9999.	9.78	0.0	0.0	306.8	0.0	306.8
I-07/07/76	17:30	1.7	25.9	201.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:30	1.7	31.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:08	2.1	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:08	2.1	31.0	-9999.	8.70	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:50	2.2	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:50	2.2	31.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:02	2.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:02	2.4	31.0	-9999.	8.19	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:55	2.4	26.5	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:55	2.4	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/07/76	22:45	2.3	26.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/07/76	22:45	2.3	31.0	-9999.	8.51	0.0	0.0	0.0	0.0	0.0
I-07/07/76	23:36	2.1	26.5	203.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:36	2.1	32.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/08/76	00:29	1.9	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:29	1.9	32.0	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:09	1.8	26.0	-9999.	9.78	0.0	0.0	102.3	0.0	102.3
D-07/08/76	01:09	1.8	29.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:57	1.6	25.1	202.	9.99	0.0	0.0	0.0	300.3	300.3

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/08/76	01:57	1.6	29.0	-9999.	9.23	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:31	1.3	24.9	200.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:31	1.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:25	1.6	25.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:25	1.6	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:06	1.8	25.5	-9999.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:06	1.8	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:48	2.0	25.5	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:48	2.0	31.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:28	2.1	26.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-07/08/76	20:28	2.1	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:12	2.2	25.1	203.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:12	2.2	31.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:57	2.3	26.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:57	2.3	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	22:40	2.3	26.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/08/76	22:40	2.3	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:23	2.3	26.5	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:23	2.3	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:00	2.2	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:00	2.2	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:47	2.0	26.0	-9999.	10.03	0.0	0.0	99.7	99.7	199.4
D-07/09/76	00:47	2.0	33.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
I-07/09/76	01:29	1.9	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/09/76	01:29	1.9	33.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/09/76	02:07	1.8	25.2	205.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/09/76	02:07	1.8	30.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:34	1.4	25.4	204.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:34	1.4	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:15	1.3	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/12/76	18:15	1.3	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:56	1.2	26.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:56	1.2	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:34	1.2	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:34	1.2	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:10	1.2	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:10	1.2	35.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:49	1.3	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:49	1.3	35.0	-9999.	10.33	0.0	0.0	96.3	0.0	96.3
I-07/12/76	21:31	1.5	25.5	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/12/76	21:31	1.5	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/12/76	22:12	1.7	24.4	191.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/12/76	22:12	1.7	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/12/76	22:49	1.9	25.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
D-07/12/76	22:49	1.9	32.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/12/76	23:31	2.0	25.5	-9999.	10.21	0.0	0.0	0.0	98.0	98.0
D-07/12/76	23:31	2.0	32.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/13/76	00:12	2.1	25.5	-9999.	10.43	0.0	0.0	0.0	287.7	287.7
D-07/13/76	00:12	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	00:54	2.2	25.5	-9999.	10.47	0.0	0.0	0.0	95.5	95.5
D-07/13/76	00:54	2.2	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	01:30	2.3	25.5	-9999.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	01:30	2.3	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/13/76	02:10	2.3	25.5	198.	10.69	0.0	0.0	0.0	0.0	0.0
D-07/13/76	02:10	2.3	30.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:36	1.6	24.7	190.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:36	1.6	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:12	1.5	25.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:12	1.5	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:52	1.4	25.5	-9999.	9.82	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/13/76	18:52	1.4	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:30	1.3	25.5	-9999.	9.57	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:30	1.3	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:05	1.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:05	1.2	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:45	1.2	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:45	1.2	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/13/76	21:21	1.2	25.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:21	1.3	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:00	1.4	24.2	184.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:00	1.4	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:42	1.7	25.0	-9999.	9.86	0.0	0.0	0.0	101.4	101.4
D-07/13/76	22:42	1.7	32.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:19	1.9	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:19	1.9	32.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:56	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	301.6	301.6
D-07/13/76	23:56	2.0	32.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:34	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/14/76	00:34	2.1	31.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:11	2.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:11	2.2	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:48	2.3	24.3	187.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:48	2.3	31.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:33	1.8	24.8	187.	10.21	0.0	0.0	98.0	0.0	98.0
D-07/14/76	17:33	1.8	36.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-07/14/76	18:09	1.7	25.5	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:09	1.7	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:49	1.6	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:49	1.6	35.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:28	1.5	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/14/76	19:28	1.5	35.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:06	1.4	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:06	1.4	35.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:42	1.3	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:42	1.3	35.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:26	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:26	1.3	35.0	-9999.	10.56	0.0	0.0	0.0	94.7	94.7
I-07/14/76	22:00	1.3	24.2	179.	10.12	0.0	0.0	0.0	197.6	197.6
D-07/14/76	22:00	1.3	35.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:39	1.4	25.0	-9999.	10.16	0.0	0.0	0.0	98.4	98.4
D-07/14/76	22:39	1.4	35.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:16	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:16	1.5	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:57	1.8	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:57	1.8	34.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:34	1.9	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/15/76	00:34	1.9	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	01:15	2.0	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/15/76	01:15	2.0	32.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/15/76	01:53	2.1	24.3	183.	10.56	0.0	0.0	0.0	0.0	0.0
D-07/15/76	01:53	2.1	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:59	1.9	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:59	1.9	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:38	1.7	25.7	189.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:38	1.7	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:19	1.6	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:19	1.6	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	1.5	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	1.5	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:35	1.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/15/76	20:35	1.4	36.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:13	1.3	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:13	1.3	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:53	1.3	25.0	181.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:53	1.3	35.0	-9999.	10.38	0.0	0.0	96.3	0.0	96.3
I-07/15/76	22:32	1.3	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:32	1.3	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:10	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:10	1.4	35.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
I-07/15/76	23:46	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:46	1.5	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:40	1.6	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:40	1.6	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:20	1.9	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/16/76	01:20	1.9	31.0	-9999.	10.02	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:55	2.0	25.0	181.	10.60	0.0	0.0	0.0	94.3	94.3
D-07/16/76	01:55	2.0	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/19/76	17:30	1.9	26.0	177.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	17:30	1.9	36.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:08	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:08	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:47	2.0	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:47	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/19/76	19:23	2.0	26.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/19/76	19:23	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:01	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:01	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:40	1.9	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:40	1.9	36.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	21:23	1.8	25.0	177.	10.12	0.0	0.0	0.0	98.8	98.8

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/20/76	21:59	1.9	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	22:51	1.8	26.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/20/76	22:51	1.8	36.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
I-07/20/76	23:33	1.6	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/20/76	23:33	1.6	35.0	-9999.	9.17	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:15	1.6	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/21/76	00:15	1.6	32.0	-9999.	10.25	0.0	0.0	0.0	97.6	97.6
I-07/21/76	00:53	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/21/76	00:53	1.5	31.0	-9999.	9.07	0.0	0.0	0.0	0.0	0.0
I-07/21/76	01:33	1.4	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/21/76	01:33	1.4	31.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/21/76	02:11	1.4	25.4	191.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/21/76	02:11	1.4	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/21/76	17:29	1.7	25.0	177.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	17:29	1.7	35.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:06	1.8	25.5	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/21/76	18:06	1.8	36.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/21/76	18:52	1.9	26.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/21/76	18:52	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/21/76	19:30	2.0	26.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/21/76	19:30	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:06	2.0	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/21/76	20:06	2.0	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/21/76	20:44	2.0	26.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/21/76	20:44	2.0	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/21/76	21:23	2.0	25.9	183.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/21/76	21:23	2.0	36.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/21/76	22:04	2.0	25.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/21/76	22:04	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/21/76	22:43	1.9	25.5	-9999.	10.21	0.0	0.0	0.0	98.0	98.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/21/76	22:43	1.9	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/21/76	23:25	1.7	26.0	-9999.	9.95	0.0	0.0	0.0	100.5	100.5
D-07/21/76	23:25	1.7	36.0	-9999.	9.86	0.0	0.0	0.0	101.4	101.4
I-07/21/76	23:55	1.7	25.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
D-07/21/76	23:53	1.7	35.0	-9999.	9.66	0.0	0.0	0.0	0.0	0.0
I-07/21/76	00:34	1.5	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/22/76	00:34	1.5	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/22/76	01:10	1.5	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	01:10	1.5	33.0	-9999.	9.86	0.0	0.0	0.0	101.4	101.4
I-07/22/76	01:50	1.4	25.0	198.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/22/76	01:50	1.4	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/22/76	17:24	1.5	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	17:24	1.5	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:01	1.7	25.0	179.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:01	1.7	36.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	18:46	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/22/76	18:46	1.9	37.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:22	2.0	26.0	-9999.	9.52	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:22	2.0	37.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
I-07/22/76	19:59	2.1	26.5	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	19:59	2.1	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/22/76	20:38	2.1	26.5	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	20:38	2.1	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:16	2.2	27.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:16	2.2	36.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/22/76	21:55	2.3	27.0	187.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/22/76	21:55	2.3	37.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/22/76	22:31	2.2	27.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/22/76	22:31	2.2	37.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/22/76	23:07	2.1	26.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/22/76	23:07	2.1	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	23:47	2.0	26.0	-9999.	10.06	0.0	0.0	0.0	0.0	0.0
D-07/22/76	23:47	2.0	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/23/76	00:33	1.9	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/23/76	00:33	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:11	1.8	26.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:11	1.8	34.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8
I-07/23/76	01:53	1.6	25.0	182.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:53	1.6	33.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/26/76	17:32	1.2	26.0	178.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:32	1.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:13	1.2	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:13	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:52	1.2	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:52	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:30	1.2	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:30	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:11	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:11	1.5	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:51	1.7	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:51	1.7	33.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-07/26/76	21:27	1.9	25.3	174.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/26/76	21:27	1.9	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:07	2.0	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:07	2.0	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:45	2.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:45	2.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	23:25	2.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/26/76	23:25	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:05	2.4	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/28/76	00:45	2.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/28/76	01:25	2.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	01:25	2.3	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/28/76	02:01	2.3	25.0	176.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	02:01	2.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:32	1.5	26.3	177.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	17:32	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:08	1.4	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:08	1.4	33.0	-9999.	9.61	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:48	1.3	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:48	1.3	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:26	1.2	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:26	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:05	1.2	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:05	1.2	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:42	1.2	25.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:42	1.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:22	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/28/76	21:22	1.4	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:01	1.6	25.0	169.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:01	1.6	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:39	1.8	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:39	1.8	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:12	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:12	2.0	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:50	2.1	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:50	2.1	34.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:25	2.2	25.0	-9999.	10.34	0.0	0.0	0.0	96.7	96.7
D-07/29/76	00:25	2.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:05	2.3	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/06/76	21:45	2.2	36.5	-9999.	9.35	0.0	0.0	0.0	0.0	0.0
I-07/06/76	22:35	2.0	26.5	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/06/76	22:35	2.0	37.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/06/76	23:32	1.8	26.4	209.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/06/76	23:32	1.8	34.0	-9999.	10.46	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:17	1.7	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:17	1.7	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:10	1.5	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/07/76	01:10	1.5	33.0	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
I-07/07/76	01:58	1.4	26.2	207.	9.86	0.0	0.0	0.0	101.4	101.4
D-07/07/76	01:58	1.4	33.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/07/76	17:30	1.7	25.9	201.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:30	1.7	31.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:08	2.1	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:08	2.1	31.0	-9999.	8.70	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:50	2.2	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:50	2.2	31.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:02	2.4	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:02	2.4	31.0	-9999.	8.19	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:55	2.4	26.5	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:55	2.4	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/07/76	22:45	2.3	26.5	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/07/76	22:45	2.3	31.0	-9999.	8.51	0.0	0.0	0.0	0.0	0.0
I-07/07/76	23:36	2.1	26.5	203.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:36	2.1	32.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/08/76	00:29	1.9	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:29	1.9	32.0	-9999.	9.41	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:09	1.8	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	01:09	1.8	29.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/08/76	01:57	1.6	25.1	202.	9.99	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/13/76	18:52	1.4	35.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:30	1.3	25.5	-9999.	9.57	0.0	0.0	0.0	104.5	104.5
D-07/13/76	19:30	1.3	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:05	1.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:05	1.2	34.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:45	1.2	25.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:45	1.2	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/13/76	21:21	1.2	25.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:21	1.3	34.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:00	1.4	24.2	184.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:00	1.4	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:42	1.7	25.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:42	1.7	32.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:19	1.9	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:19	1.9	32.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:56	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:56	2.0	32.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:34	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:34	2.1	31.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:11	2.2	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:11	2.2	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/14/76	01:48	2.3	24.3	187.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/14/76	01:48	2.3	31.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:33	1.8	24.8	187.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:33	1.8	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:09	1.7	25.5	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:09	1.7	36.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:49	1.6	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:49	1.6	35.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:28	1.5	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/15/76	20:35	1.4	36.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:13	1.3	26.0	-9999.	9.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:13	1.3	35.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:53	1.3	25.0	181.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:53	1.3	35.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:32	1.3	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:32	1.3	35.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:10	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:10	1.4	35.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:46	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:46	1.5	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:40	1.8	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:40	1.8	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:20	1.9	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/16/76	01:20	1.9	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/16/76	01:55	2.0	25.0	181.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/16/76	01:55	2.0	31.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/19/76	17:30	1.9	26.0	177.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	17:30	1.9	36.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:08	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:08	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	18:47	2.0	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/19/76	18:47	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/19/76	19:23	2.0	26.0	-9999.	10.16	0.0	0.0	98.4	0.0	98.4
D-07/19/76	19:23	2.0	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:01	1.9	26.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:01	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	20:40	1.9	25.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/19/76	20:40	1.9	36.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	21:23	1.8	25.0	177.	10.12	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/19/76	21:23	1.8	36.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/19/76	22:00	1.7	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/19/76	22:00	1.7	35.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/19/76	22:38	1.6	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/19/76	22:38	1.6	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/19/76	23:18	1.5	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/19/76	23:18	1.5	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/19/76	23:57	1.4	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/19/76	23:57	1.4	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/20/76	00:35	1.3	25.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/20/76	00:35	1.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/20/76	01:10	1.3	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/20/76	01:10	1.3	31.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/20/76	01:54	1.3	25.0	175.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/20/76	01:54	1.3	31.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/20/76	17:32	1.8	26.0	183.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/20/76	17:32	1.8	37.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:10	1.9	26.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/20/76	18:10	1.9	36.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/20/76	18:45	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	18:45	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/20/76	19:25	1.9	26.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/20/76	19:25	1.9	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:04	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/20/76	20:04	2.0	37.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/20/76	20:43	2.0	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/20/76	20:43	2.0	36.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:20	2.0	26.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/20/76	21:20	2.0	36.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/20/76	21:59	1.9	25.0	185.	10.03	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/22/76	23:07	2.1	36.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	23:47	2.0	26.0	-9999.	10.06	0.0	0.0	0.0	99.4	99.4
D-07/22/76	23:47	2.0	36.0	-9999.	9.73	0.0	0.0	0.0	0.0	0.0
I-07/23/76	00:33	1.9	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/23/76	00:33	1.9	36.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:11	1.8	26.0	-9999.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:11	1.8	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/23/76	01:53	1.6	25.0	182.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/23/76	01:53	1.6	33.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
I-07/26/76	17:32	1.2	26.0	178.	9.69	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:32	1.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:13	1.2	26.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:13	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:52	1.2	26.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:52	1.2	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:30	1.2	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:30	1.2	33.0	-9999.	10.74	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:11	1.5	25.0	-9999.	10.60	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:11	1.5	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:51	1.7	25.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:51	1.7	33.0	-9999.	10.56	0.0	0.0	0.0	0.0	0.0
I-07/26/76	21:27	1.9	25.3	174.	10.65	0.0	0.0	0.0	0.0	0.0
D-07/26/76	21:27	1.9	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:07	2.0	25.0	-9999.	10.12	0.0	0.0	0.0	296.4	296.4
D-07/26/76	22:07	2.0	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/26/76	22:45	2.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:45	2.2	34.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/26/76	23:25	2.3	25.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
D-07/26/76	23:25	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:05	2.4	25.0	-9999.	10.12	0.0	0.0	0.0	98.8	98.8

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/27/76	00:05	2.4	33.0	-9999.	10.03	0.0	0.0	199.3	0.0	199.3
I-07/27/76	00:45	2.4	25.0	-9999.	10.08	0.0	0.0	0.0	99.2	99.2
D-07/27/76	00:45	2.4	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/27/76	01:25	2.3	26.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
D-07/27/76	01:25	2.3	34.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/27/76	02:05	2.2	25.4	177.	9.82	0.0	0.0	0.0	203.7	203.7
D-07/27/76	02:05	2.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/27/76	17:38	1.3	26.0	178.	10.12	0.0	0.0	0.0	0.0	0.0
D-07/27/76	17:38	1.3	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:16	1.2	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:16	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:54	1.2	26.0	-9999.	9.95	0.0	0.0	100.5	0.0	100.5
D-07/27/76	18:54	1.2	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/27/76	19:37	1.2	25.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:37	1.2	33.0	-9999.	10.74	0.0	0.0	93.1	0.0	93.1
I-07/27/76	20:13	1.2	25.0	-9999.	10.35	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:13	1.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:53	1.5	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:53	1.5	32.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/27/76	21:33	1.8	25.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-07/27/76	21:33	1.8	32.0	-9999.	10.12	0.0	0.0	98.8	0.0	98.8
I-07/27/76	22:13	1.9	25.0	-9999.	10.03	0.0	0.0	0.0	99.7	99.7
D-07/27/76	22:13	1.9	32.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:53	2.0	25.0	173.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/27/76	22:53	2.0	32.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
I-07/27/76	23:25	2.1	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:25	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:05	2.3	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:05	2.3	33.0	-9999.	10.43	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:45	2.3	25.0	-9999.	10.29	0.0	0.0	0.0	97.1	97.1

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/28/76	00:45	2.3	31.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/28/76	01:25	2.3	25.0	-9999.	9.93	0.0	0.0	0.0	0.0	0.0
D-07/28/76	01:25	2.3	31.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
I-07/28/76	02:01	2.3	25.0	176.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/28/76	02:01	2.3	31.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:32	1.5	26.3	177.	9.78	0.0	0.0	102.3	0.0	102.3
D-07/28/76	17:32	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:08	1.4	26.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:08	1.4	33.0	-9999.	9.61	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:48	1.3	26.0	-9999.	9.82	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:48	1.3	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:26	1.2	26.0	-9999.	9.95	0.0	0.0	100.5	100.5	201.0
D-07/28/76	19:26	1.2	33.0	-9999.	10.21	0.0	0.0	98.0	0.0	98.0
I-07/28/76	20:05	1.2	25.0	-9999.	9.90	0.0	0.0	202.0	0.0	202.0
D-07/28/76	20:05	1.2	33.0	-9999.	10.51	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:42	1.2	25.0	-9999.	9.73	0.0	0.0	102.7	0.0	102.7
D-07/28/76	20:42	1.2	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:22	1.4	25.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
D-07/28/76	21:22	1.4	33.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:01	1.6	25.0	169.	10.47	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:01	1.6	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/28/76	22:39	1.8	25.0	-9999.	10.38	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:39	1.8	33.0	-9999.	10.29	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:12	2.0	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:12	2.0	34.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:50	2.1	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:50	2.1	34.0	-9999.	9.99	0.0	0.0	100.1	0.0	100.1
I-07/29/76	00:25	2.2	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0
D-07/29/76	00:25	2.2	33.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:05	2.3	25.0	-9999.	10.34	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
D-07/29/76	01:05	2.3	33.0	-9999.	10.16	0.0	0.0	0.0	0.0	0.0
I-07/29/76	01:42	2.3	26.0	177.	10.51	0.0	0.0	0.0	0.0	0.0
D-07/29/76	01:42	2.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	17:38	1.7	25.0	-9999.	10.21	0.0	0.0	195.9	0.0	195.9
D-07/29/76	17:38	1.7	34.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:11	1.6	25.4	172.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:11	1.6	34.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
I-07/29/76	18:51	1.5	25.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:51	1.5	33.0	-9999.	9.95	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:30	1.4	25.0	-9999.	9.82	0.0	0.0	101.8	0.0	101.8
D-07/29/76	19:30	1.4	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:13	1.3	25.0	-9999.	10.08	0.0	0.0	99.2	0.0	99.2
D-07/29/76	20:12	1.3	33.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:45	1.3	25.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:45	1.3	33.0	-9999.	10.47	0.0	0.0	0.0	0.0	0.0
I-07/29/76	21:25	1.3	25.1	170.	9.90	0.0	0.0	0.0	0.0	0.0
D-07/29/76	21:25	1.3	33.0	-9999.	9.86	0.0	0.0	0.0	0.0	0.0
I-07/29/76	22:45	1.7	25.0	-9999.	10.08	0.0	0.0	0.0	0.0	0.0
D-07/29/76	22:45	1.7	33.0	-9999.	10.51	0.0	0.0	95.1	0.0	95.1
I-07/29/76	23:25	1.9	25.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:25	1.9	33.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:15	2.1	25.0	-9999.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:15	2.1	33.0	-9999.	10.12	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:54	2.2	25.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:54	2.2	33.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-07/30/76	01:31	2.3	25.0	-9999.	10.29	0.0	0.0	97.1	0.0	97.1
D-07/30/76	01:31	2.3	32.0	-9999.	10.03	0.0	0.0	0.0	0.0	0.0
I-07/30/76	02:08	2.3	25.2	172.	10.43	0.0	0.0	0.0	0.0	0.0
D-07/30/76	02:08	2.3	31.0	-9999.	10.21	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

2.2 BOWLINE POINT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-03/18/76	18:12	-0.5	3.0	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/18/76	18:06	-9.9	13.0	-9999.	7.39	0.0	0.0	0.0	0.0	0.0
I-03/18/76	19:34	-0.6	3.5	540.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/18/76	19:35	-9.9	12.5	-9999.	7.69	0.0	0.0	0.0	0.0	0.0
I-03/18/76	20:35	-0.2	3.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-03/18/76	20:39	-9.9	12.3	-9999.	7.39	0.0	0.0	0.0	0.0	0.0
I-03/18/76	21:38	0.2	3.9	380.	12.43	0.0	0.0	0.0	0.0	0.0
D-03/18/76	21:38	-9.9	12.5	-9999.	7.39	0.0	0.0	0.0	0.0	0.0
I-03/18/76	22:43	0.5	4.0	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-03/18/76	22:43	-9.9	13.1	550.	7.69	0.0	0.0	0.0	0.0	0.0
I-03/18/76	23:52	0.7	3.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/18/76	23:49	-9.9	12.5	-9999.	7.69	0.0	0.0	0.0	0.0	0.0
I-03/19/76	00:58	0.7	3.9	410.	14.27	0.0	0.0	0.0	0.0	0.0
D-03/19/76	01:03	-9.9	11.5	-9999.	7.69	0.0	0.0	0.0	0.0	0.0
I-03/30/76	17:51	0.2	7.2	130.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/30/76	18:00	-9.9	16.5	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	19:14	0.5	8.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-03/30/76	19:15	-9.9	16.4	165.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	20:33	0.9	7.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/30/76	20:28	-9.9	16.0	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	21:33	1.1	7.1	130.	11.79	0.0	0.0	0.0	0.0	0.0
D-03/30/76	21:28	-9.9	16.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-03/30/76	22:35	1.2	7.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/30/76	22:37	-9.9	16.3	165.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	23:45	0.9	7.5	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-03/30/76	23:55	-9.9	15.8	-9999.	7.90	0.0	0.0	0.0	0.0	0.0
I-03/31/76	01:00	0.7	7.5	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-03/31/76	01:00	-9.9	13.7	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-05/18/76	00:30	0.8	16.5	128.	20.61	0.0	0.0	0.0	0.0	0.0
D-05/18/76	00:30	-9.9	21.0	-9999.	12.50	0.0	0.0	160.0	0.0	160.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/19/76	23:15	-0.3	15.0	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/19/76	23:15	-9.9	21.5	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-05/20/76	01:11	0.0	14.5	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/20/76	01:11	-9.9	19.0	-9999.	11.40	0.0	0.0	87.7	0.0	87.7
I-05/24/76	17:55	0.5	15.8	130.	17.78	0.0	0.0	0.0	0.0	0.0
D-05/24/76	17:55	-9.9	23.5	-9999.	12.50	0.0	0.0	160.0	0.0	160.0
I-05/24/76	19:40	0.8	16.4	130.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/24/76	19:40	-9.9	24.0	-9999.	12.70	0.0	0.0	157.4	0.0	157.4
I-05/24/76	22:04	0.7	16.5	130.	18.33	0.0	0.0	0.0	0.0	0.0
D-05/24/76	22:04	-9.9	23.5	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-05/24/76	23:57	0.4	16.5	-9999.	18.25	0.0	0.0	0.0	0.0	0.0
D-05/24/76	23:57	-9.9	21.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-05/25/76	01:13	0.2	16.5	130.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/25/76	01:13	-9.9	20.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-05/25/76	17:15	0.3	17.0	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	17:15	-9.9	24.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-05/25/76	18:35	0.7	16.5	122.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	18:35	-9.9	22.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-05/25/76	21:00	1.1	16.5	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	21:00	-9.9	21.0	-9999.	13.60	0.0	0.0	147.1	0.0	147.1
I-05/25/76	22:25	1.0	16.5	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	22:25	-9.9	20.0	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-05/25/76	23:48	0.6	16.0	120.	19.30	0.0	0.0	0.0	0.0	0.0
D-05/25/76	23:48	-9.9	19.5	-9999.	13.30	0.0	0.0	300.8	0.0	300.8
I-05/26/76	17:50	0.2	16.5	160.	20.67	0.0	0.0	0.0	0.0	0.0
D-05/26/76	17:50	-9.9	26.0	-9999.	12.80	0.0	0.0	0.0	0.0	0.0
I-05/26/76	19:17	0.7	16.5	-9999.	18.49	0.0	0.0	0.0	0.0	0.0
D-05/26/76	19:17	-9.9	26.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-05/26/76	20:46	0.8	16.5	-9999.	19.96	0.0	0.0	0.0	0.0	0.0
D-05/26/76	20:46	-9.9	26.0	-9999.	11.60	0.0	0.0	86.2	0.0	86.2

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/19/76	23:15	-0.3	15.0	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/19/76	23:15	-9.9	21.5	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-05/20/76	01:11	0.0	14.5	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/20/76	01:11	-9.9	19.0	-9999.	11.40	0.0	0.0	87.7	0.0	87.7
I-05/24/76	17:55	0.5	15.8	130.	17.78	0.0	0.0	0.0	0.0	0.0
D-05/24/76	17:55	-9.9	23.5	-9999.	12.50	0.0	0.0	160.0	0.0	160.0
I-05/24/76	19:40	0.8	16.4	130.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/24/76	19:40	-9.9	24.0	-9999.	12.70	0.0	0.0	157.4	0.0	157.4
I-05/24/76	22:04	0.7	16.5	130.	18.33	0.0	0.0	0.0	0.0	0.0
D-05/24/76	22:04	-9.9	23.5	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-05/24/76	23:57	0.4	16.5	-9999.	18.25	0.0	0.0	0.0	0.0	0.0
D-05/24/76	23:57	-9.9	21.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-05/25/76	01:13	0.2	16.5	130.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/25/76	01:13	-9.9	20.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-05/25/76	17:15	0.3	17.0	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	17:15	-9.9	24.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-05/25/76	18:35	0.7	16.5	122.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	18:35	-9.9	22.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-05/25/76	21:00	1.1	16.5	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	21:00	-9.9	21.0	-9999.	13.60	0.0	0.0	147.1	0.0	147.1
I-05/25/76	22:25	1.0	16.5	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	22:25	-9.9	20.0	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-05/25/76	23:48	0.6	16.0	120.	19.30	0.0	0.0	0.0	0.0	0.0
D-05/25/76	23:48	-9.9	19.5	-9999.	13.30	0.0	0.0	300.8	0.0	300.8
I-05/26/76	17:50	0.2	16.5	160.	20.67	0.0	0.0	0.0	0.0	0.0
D-05/26/76	17:50	-9.9	26.0	-9999.	12.80	0.0	0.0	0.0	0.0	0.0
I-05/26/76	19:17	0.7	16.5	-9999.	18.49	0.0	0.0	0.0	0.0	0.0
D-05/26/76	19:17	-9.9	26.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-05/26/76	20:46	0.8	16.5	-9999.	19.96	0.0	0.0	0.0	0.0	0.0
D-05/26/76	20:46	-9.9	26.0	-9999.	11.60	0.0	0.0	86.2	0.0	86.2

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/26/76	22:13	0.9	16.4	160.	19.05	0.0	0.0	0.0	0.0	0.0
D-05/26/76	22:13	-9.9	22.5	-9999.	11.70	0.0	0.0	256.4	0.0	256.4
I-05/26/76	23:36	0.7	16.0	-9999.	17.78	0.0	0.0	0.0	0.0	0.0
D-05/26/76	23:36	-9.9	20.0	-9999.	11.20	0.0	0.0	178.6	0.0	178.6
I-05/27/76	01:02	0.3	16.2	160.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/27/76	01:02	-9.9	19.5	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/02/76	21:05	0.0	17.0	190.	17.78	0.0	0.0	0.0	0.0	0.0
D-06/02/76	21:05	-9.9	24.0	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/02/76	22:25	0.4	17.0	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/02/76	22:25	-9.9	22.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/02/76	23:57	0.8	17.4	175.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/02/76	23:57	-9.9	20.0	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/03/76	01:15	1.1	17.0	180.	16.85	0.0	0.0	0.0	0.0	0.0
D-06/03/76	01:15	-9.9	20.0	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/03/76	17:12	0.5	17.3	180.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/03/76	17:12	-9.9	24.0	-9999.	13.85	0.0	0.0	144.5	0.0	144.5
I-06/03/76	18:12	0.2	17.5	-9999.	18.25	0.0	0.0	0.0	0.0	0.0
D-06/03/76	18:12	-9.9	25.0	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/03/76	19:07	0.1	17.0	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/03/76	19:07	-9.9	25.0	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/03/76	19:58	-0.1	17.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
D-06/03/76	19:58	-0.2	24.0	-9999.	13.85	0.0	0.0	433.3	0.0	433.3
I-06/03/76	21:17	-0.2	17.2	175.	15.45	0.0	0.0	0.0	0.0	0.0
D-06/03/76	21:17	-9.9	23.5	-9999.	13.85	0.0	0.0	216.7	0.0	216.7
I-06/03/76	22:17	-0.2	17.0	-9999.	21.07	0.0	0.0	0.0	0.0	0.0
D-06/03/76	22:17	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	23:13	-0.2	18.0	-9999.	19.71	0.0	0.0	0.0	0.0	0.0
D-06/03/76	23:13	-9.9	23.5	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/04/76	00:07	0.4	17.0	-9999.	21.07	0.0	0.0	0.0	0.0	0.0
D-06/04/76	00:07	-9.9	21.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/04/76	01:03	0.6	17.4	170.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/04/76	01:03	-9.9	21.0	-9999.	13.85	0.0	0.0	288.9	0.0	288.9
I-06/07/76	17:52	0.7	18.7	160.	7.37	0.0	0.0	0.0	0.0	0.0
D-06/07/76	17:52	-9.9	27.5	-9999.	13.70	0.0	0.0	0.0	0.0	0.0
I-06/07/76	18:39	0.8	19.0	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/07/76	18:39	-9.9	26.5	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
I-06/07/76	19:22	0.8	18.5	-9999.	5.73	0.0	0.0	174.4	0.0	174.4
D-06/07/76	19:22	-9.9	25.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:09	0.7	18.8	160.	1.43	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:09	-9.9	25.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:59	0.6	18.8	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:59	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	22:46	0.7	18.1	160.	8.51	0.0	0.0	0.0	0.0	0.0
D-06/07/76	22:46	-9.9	23.5	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	23:30	0.0	18.5	-9999.	8.22	0.0	0.0	0.0	0.0	0.0
D-06/07/76	23:30	-9.9	22.5	-9999.	12.90	0.0	0.0	77.5	0.0	77.5
I-06/08/76	00:15	0.0	18.0	-9999.	4.02	0.0	0.0	0.0	0.0	0.0
D-06/08/76	00:15	-9.9	22.0	-9999.	12.20	0.0	0.0	82.0	0.0	82.0
I-06/08/76	01:07	-0.1	18.0	-9999.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/08/76	01:07	-9.9	21.5	-9999.	13.50	0.0	0.0	148.1	0.0	148.1
I-06/08/76	16:41	0.2	19.0	145.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/08/76	16:41	-9.9	24.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	17:25	0.5	19.0	-9999.	12.88	0.0	0.0	0.0	0.0	0.0
D-06/08/76	17:25	-9.9	25.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-06/08/76	18:21	0.7	18.5	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-06/08/76	18:21	-9.9	26.0	-9999.	15.60	0.0	0.0	64.1	0.0	64.1
I-06/08/76	19:07	0.8	18.5	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-06/08/76	19:07	-9.9	28.0	-9999.	16.90	0.0	0.0	59.2	0.0	59.2
I-06/08/76	19:59	0.9	18.5	-9999.	13.73	0.0	0.0	72.9	0.0	72.9
D-06/08/76	19:59	-9.9	28.0	-9999.	15.20	0.0	0.0	65.8	0.0	65.8

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/08/76	20:48	1.1	18.9	160.	14.04	0.0	0.0	0.0	0.0	0.0
D-06/08/76	20:48	-9.9	28.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	22:26	0.6	19.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	22:26	-9.9	28.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-06/08/76	23:15	0.3	18.8	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	23:15	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:04	0.2	18.6	150.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:04	-9.9	23.5	-9999.	13.90	0.0	0.0	71.9	0.0	71.9
I-06/09/76	00:48	0.0	18.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:48	-9.9	22.5	-9999.	15.40	0.0	0.0	64.9	0.0	64.9
I-06/09/76	17:15	0.0	19.2	160.	8.07	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:15	-9.9	26.5	-9999.	13.28	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:10	0.5	19.0	-9999.	10.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:10	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:59	0.8	19.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:59	-9.9	29.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	19:49	0.9	19.3	160.	15.10	0.0	0.0	66.2	0.0	66.2
D-06/09/76	19:49	-9.9	27.9	-9999.	15.00	0.0	0.0	66.6	0.0	66.6
I-06/09/76	20:39	1.0	19.2	140.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:39	-9.9	28.0	-9999.	14.13	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:27	1.0	19.0	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:27	-9.9	27.2	-9999.	17.43	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:04	0.3	19.0	160.	11.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:04	-9.9	28.0	-9999.	14.42	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:49	0.7	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:49	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	00:43	0.3	18.8	160.	7.51	0.0	0.0	0.0	0.0	0.0
D-06/10/76	00:43	-9.9	23.5	-9999.	13.85	0.0	0.0	144.5	0.0	144.5
I-06/10/76	17:08	-0.3	19.2	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:08	-9.9	29.0	-9999.	12.36	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	17:55	0.1	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:55	-9.9	29.0	-9999.	13.56	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:41	0.5	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:41	-9.9	29.5	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	19:20	0.8	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	19:20	-9.9	29.0	-9999.	12.73	0.0	0.0	78.6	0.0	78.6
I-06/10/76	20:06	0.8	19.7	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:06	-9.9	29.0	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:54	1.0	19.8	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:54	-9.9	29.5	-9999.	12.73	0.0	0.0	78.6	0.0	78.6
I-06/10/76	22:30	0.9	19.8	-9999.	19.05	0.0	0.0	0.0	0.0	0.0
D-06/10/76	22:30	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	23:12	0.9	20.0	-9999.	23.22	0.0	0.0	0.0	0.0	0.0
D-06/10/76	23:12	-9.9	28.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	24:00	0.9	19.8	-9999.	19.22	0.0	0.0	0.0	0.0	0.0
D-06/10/76	24:00	-9.9	26.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:50	0.4	19.6	160.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:50	-9.9	25.0	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-06/14/76	17:00	0.0	19.4	210.	11.76	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:00	-9.9	29.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	17:55	-0.2	19.5	-9999.	5.28	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:55	-9.9	29.0	-9999.	10.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	18:40	-0.3	19.0	-9999.	6.34	0.0	0.0	0.0	0.0	0.0
D-06/14/76	18:40	-9.9	29.0	-9999.	11.90	0.0	0.0	84.0	0.0	84.0
I-06/14/76	19:29	-0.4	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/14/76	19:29	-9.9	29.0	-9999.	11.50	0.0	0.0	87.0	0.0	87.0
I-06/14/76	20:17	-0.4	19.5	-9999.	8.51	0.0	0.0	0.0	0.0	0.0
D-06/14/76	20:17	-9.9	29.0	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-06/14/76	21:09	0.0	19.5	210.	6.29	0.0	0.0	0.0	0.0	0.0
D-06/14/76	21:09	-9.9	29.0	-9999.	9.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	22:43	0.5	19.5	-9999.	9.12	0.0	0.0	0.0	0.0	0.0
D-06/14/76	22:43	-9.9	27.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	23:30	0.7	19.5	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-06/14/76	23:30	-9.9	26.0	-9999.	11.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	00:14	0.8	19.5	-9999.	11.88	0.0	0.0	0.0	0.0	0.0
D-06/15/76	00:14	-9.9	26.0	-9999.	11.70	0.0	0.0	85.5	0.0	85.5
I-06/15/76	01:01	0.9	19.5	190.	11.64	0.0	0.0	0.0	0.0	0.0
D-06/15/76	01:01	-9.9	25.5	-9999.	13.10	0.0	0.0	76.3	0.0	76.3
I-06/15/76	16:58	0.1	19.9	200.	6.67	0.0	0.0	0.0	0.0	0.0
D-06/15/76	16:58	-9.9	30.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/15/76	17:52	0.0	20.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/15/76	17:52	-9.9	30.0	-9999.	15.70	0.0	0.0	63.7	0.0	63.7
I-06/15/76	18:37	-0.1	20.0	-9999.	12.94	0.0	0.0	0.0	0.0	0.0
D-06/15/76	18:37	-9.9	30.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	19:26	-0.3	20.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/15/76	19:26	-9.9	30.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-06/15/76	20:16	-0.4	20.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/15/76	20:16	-9.9	30.0	-9999.	15.50	0.0	0.0	64.5	0.0	64.5
I-06/15/76	21:38	-0.2	20.0	-9999.	12.81	0.0	0.0	0.0	0.0	0.0
D-06/15/76	21:38	-9.9	30.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-06/15/76	22:27	-0.1	20.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/15/76	22:27	-9.9	30.0	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/15/76	23:13	0.4	20.2	190.	15.03	0.0	0.0	0.0	0.0	0.0
D-06/15/76	23:13	-9.9	30.0	-9999.	17.20	0.0	0.0	58.1	0.0	58.1
I-06/16/76	00:02	0.6	20.0	-9999.	15.53	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:02	-9.9	29.0	-9999.	17.90	0.0	0.0	0.0	0.0	0.0
I-06/16/76	00:47	0.7	20.0	180.	13.46	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:47	-9.9	28.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-06/16/76	16:24	0.6	20.5	190.	9.76	0.0	0.0	0.0	0.0	0.0
D-06/16/76	16:24	-9.9	31.0	-9999.	16.90	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/16/76	17:11	0.4	21.0	-9999.	8.22	0.0	0.0	0.0	0.0	0.0
D-06/16/76	17:11	-9.9	30.5	-9999.	16.60	0.0	0.0	60.2	0.0	60.2
I-06/16/76	18:03	0.1	21.0	-9999.	7.79	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:03	-9.9	31.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/16/76	19:02	0.0	21.0	-9999.	4.15	0.0	0.0	0.0	0.0	0.0
D-06/16/76	19:02	-9.9	28.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-06/16/76	19:50	-0.1	20.0	-9999.	10.14	0.0	0.0	0.0	0.0	0.0
D-06/16/76	19:50	-9.9	28.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-06/16/76	20:42	-0.3	20.1	190.	7.15	0.0	0.0	0.0	0.0	0.0
D-06/16/76	20:42	-9.9	24.5	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-06/16/76	21:29	-0.2	20.0	-9999.	4.92	0.0	0.0	0.0	0.0	0.0
D-06/16/76	21:29	-9.9	24.0	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-06/16/76	23:05	0.0	20.0	-9999.	7.84	0.0	0.0	0.0	0.0	0.0
D-06/16/76	23:05	-9.9	21.5	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/16/76	23:53	0.4	20.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-06/16/76	23:53	-9.9	21.0	-9999.	15.00	0.0	0.0	66.7	0.0	66.7
I-06/17/76	16:33	0.6	20.8	180.	17.47	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:33	-9.9	22.0	-9999.	19.40	0.0	0.0	0.0	0.0	0.0
I-06/17/76	17:19	0.5	21.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/17/76	17:19	-9.9	22.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:05	0.2	21.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:03	-9.9	22.5	-9999.	15.20	0.0	0.0	65.8	0.0	65.8
I-06/17/76	18:49	0.1	21.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:49	-9.9	22.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/17/76	19:35	0.0	21.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	19:35	-9.9	22.0	-9999.	13.50	0.0	0.0	74.1	0.0	74.1
I-06/17/76	20:23	-0.2	20.5	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	20:23	-9.9	21.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/17/76	21:08	-0.2	20.6	175.	7.97	0.0	0.0	0.0	0.0	0.0
D-06/17/76	21:08	-9.9	21.0	-9999.	14.10	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:38	-0.3	20.5	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	22:38	-9.9	21.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/17/76	23:23	-0.1	21.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:23	-9.9	21.0	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-06/18/76	00:10	0.1	20.5	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:10	-9.9	21.0	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/18/76	00:55	0.4	21.0	170.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:55	-9.9	21.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-06/21/76	16:40	0.5	24.0	140.	7.29	0.0	0.0	0.0	0.0	0.0
D-06/21/76	16:40	-9.9	33.0	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/21/76	17:27	0.7	24.5	151.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	17:27	-9.9	32.5	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	18:15	0.8	23.0	150.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/21/76	18:15	-9.9	32.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:03	0.8	26.0	150.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:03	-9.9	32.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:48	0.8	25.0	150.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:48	-9.9	32.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/21/76	20:30	0.6	25.5	150.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:30	-9.9	32.5	-9999.	12.60	0.0	0.0	79.4	0.0	79.4
I-06/21/76	21:17	0.5	25.0	160.	4.77	0.0	0.0	209.7	0.0	209.7
D-06/21/76	21:17	-9.9	32.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	23:11	0.3	22.8	170.	2.80	0.0	0.0	0.0	0.0	0.0
D-06/21/76	23:11	-9.9	28.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/21/76	23:56	0.2	25.0	250.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/21/76	23:56	-9.9	28.0	-9999.	10.40	0.0	0.0	0.0	0.0	0.0
I-06/22/76	00:41	0.0	22.5	350.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	00:41	-9.9	28.0	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/22/76	16:37	0.4	23.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-06/22/76	16:37	-9.9	33.0	-9999.	10.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	17:25	0.5	22.8	240.	5.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	17:25	-9.9	33.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/22/76	18:10	0.7	23.0	-9999.	5.18	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:10	-9.9	33.0	-9999.	11.60	0.0	0.0	0.0	0.0	0.0
I-06/22/76	18:57	0.7	23.0	-9999.	6.10	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:57	-9.9	33.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/22/76	19:44	0.7	23.0	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/22/76	19:44	-9.9	33.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/22/76	20:36	0.7	23.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	20:36	-9.9	33.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/22/76	21:23	0.6	22.5	260.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/22/76	21:23	-9.9	33.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/22/76	22:59	0.3	22.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	22:59	-9.9	33.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/22/76	23:46	0.2	22.5	-9999.	1.67	0.0	0.0	0.0	0.0	0.0
D-06/22/76	23:46	-9.9	32.0	-9999.	10.40	0.0	0.0	0.0	0.0	0.0
I-06/23/76	00:37	0.1	22.5	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/23/76	00:37	-9.9	32.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/23/76	01:19	-0.1	22.4	260.	1.35	0.0	0.0	0.0	0.0	0.0
D-06/23/76	01:19	-9.9	31.0	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:12	0.1	23.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:12	-9.9	33.0	-9999.	11.00	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:59	0.2	22.4	450.	4.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:59	-9.9	33.0	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	17:45	0.5	22.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:45	-9.9	33.5	-9999.	10.80	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:28	0.6	23.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-06/23/76	18:28	-9.9	33.5	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:15	0.8	22.0	400.	6.70	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:15	-9.9	33.5	-9999.	11.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	20:01	0.8	23.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:01	-9.9	33.5	-9999.	13.50	0.0	0.0	74.1	0.0	74.1
I-06/23/76	20:45	0.8	23.0	-9999.	13.62	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:45	-9.9	33.5	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:28	0.8	22.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	21:28	-9.9	33.0	-9999.	11.70	0.0	0.0	85.5	0.0	85.5
I-06/23/76	23:02	-9.9	23.0	420.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:02	-9.9	33.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:48	0.4	22.5	460.	5.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:48	-9.9	33.0	-9999.	10.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	00:31	0.1	22.5	600.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/24/76	00:31	-9.9	33.0	-9999.	11.20	0.0	0.0	0.0	0.0	0.0
I-06/24/76	01:09	0.0	23.0	750.	2.80	0.0	0.0	0.0	0.0	0.0
D-06/24/76	01:09	-9.9	33.0	-9999.	11.40	0.0	0.0	87.7	0.0	87.7
I-06/24/76	16:20	-0.3	23.5	770.	0.32	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:20	-9.9	34.0	-9999.	11.70	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:07	0.0	23.6	815.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:07	-9.9	34.0	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:52	0.2	23.5	-9999.	5.85	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:52	-9.9	34.0	-9999.	13.00	0.0	0.0	0.0	0.0	0.0
I-06/24/76	18:38	0.5	23.0	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:38	-9.9	33.8	-9999.	14.00	0.0	0.0	71.4	0.0	71.4
I-06/24/76	19:30	0.7	23.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:30	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	20:18	0.8	23.0	-9999.	6.86	0.0	0.0	0.0	0.0	0.0
D-06/24/76	20:18	-9.9	34.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:04	0.8	23.1	790.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/24/76	21:04	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:55	0.8	23.5	-9999.	7.72	0.0	0.0	0.0	0.0	0.0
D-06/24/76	21:55	-9.9	33.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	23:30	0.5	23.0	-9999.	6.19	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:30	-9.9	33.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/25/76	00:17	0.3	23.0	-9999.	5.60	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:17	-9.9	32.5	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/25/76	01:00	0.2	23.0	960.	5.02	0.0	0.0	0.0	0.0	0.0
D-06/25/76	01:00	-9.9	33.0	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/28/76	16:30	-0.1	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/28/76	16:30	-9.9	34.0	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-06/28/76	17:24	-0.2	24.0	2210.	1.59	0.0	0.0	1887.3	0.0	1887.3
D-06/28/76	17:24	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:13	-0.4	24.0	-9999.	1.51	0.0	0.0	2649.7	0.0	2649.7
D-06/28/76	18:13	-9.9	34.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:02	-0.1	24.0	-9999.	2.64	0.0	0.0	1138.0	0.0	1138.0
D-06/28/76	19:02	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:55	0.2	24.5	-9999.	4.60	0.0	0.0	434.6	0.0	434.6
D-06/28/76	19:55	-9.9	35.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:46	0.4	24.5	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:46	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	22:52	0.9	24.1	2170.	9.36	0.0	0.0	0.0	0.0	0.0
D-06/28/76	22:52	-9.9	34.5	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/28/76	23:42	1.0	24.5	-9999.	10.01	0.0	0.0	399.5	0.0	399.5
D-06/28/76	23:42	-9.9	34.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/29/76	00:30	0.9	24.0	-9999.	7.97	0.0	0.0	1128.7	0.0	1128.7
D-06/29/76	00:30	-9.9	34.5	-9999.	13.40	0.0	0.0	74.6	0.0	74.6
I-06/29/76	01:11	0.8	24.0	2080.	7.72	0.0	0.0	259.2	0.0	259.2
D-06/29/76	01:11	-9.9	33.5	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/29/76	19:55	-0.1	24.0	1940.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:55	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:40	0.2	24.0	-9999.	10.99	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:40	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	21:27	0.5	24.0	1800.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/29/76	21:27	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:15	0.7	24.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:15	-9.9	34.0	-9999.	13.30	0.0	0.0	150.4	0.0	150.4
I-06/29/76	22:58	0.9	24.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:58	-9.9	34.0	-9999.	13.80	0.0	0.0	72.5	0.0	72.5
I-06/29/76	23:41	1.0	24.0	-9999.	10.05	0.0	0.0	0.0	0.0	0.0
D-06/29/76	23:41	-9.9	33.0	2050.	13.80	0.0	0.0	72.5	0.0	72.5
I-06/30/76	00:28	1.0	24.0	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
D-06/30/76	00:28	-9.9	33.0	-9999.	16.50	0.0	0.0	60.6	0.0	60.6
I-06/30/76	01:10	1.0	23.8	1940.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/30/76	01:10	-9.9	32.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/30/76	17:13	0.2	23.8	1670.	4.93	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:13	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:17	0.2	24.0	-9999.	3.70	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:17	-9.9	34.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:07	0.5	23.8	1500.	5.55	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:07	-9.9	34.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:54	0.8	24.0	-9999.	7.46	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:54	-9.9	34.0	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:40	0.9	23.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:40	-9.9	34.0	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-07/01/76	00:40	1.1	23.6	1570.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	00:40	-9.9	34.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-07/01/76	17:32	0.3	24.1	1360.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:32	-9.9	25.0	-9999.	16.90	0.0	0.0	59.2	0.0	59.2
I-07/01/76	18:17	0.2	24.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/01/76	18:17	-9.9	25.0	-9999.	15.90	0.0	0.0	62.9	0.0	62.9
I-07/01/76	19:08	0.1	24.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:08	-9.9	24.5	-9999.	17.10	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	19:55	0.6	24.0	-9999.	7.55	0.0	0.0	132.5	0.0	132.5
D-07/01/76	19:55	-9.9	24.5	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-07/01/76	20:45	0.6	24.3	1100.	6.70	0.0	0.0	0.0	0.0	0.0
D-07/01/76	20:45	-9.9	24.5	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:33	0.1	24.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:33	-9.9	24.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:07	0.4	24.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:07	-9.9	24.5	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:52	0.8	24.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:52	-9.9	24.5	-9999.	17.30	0.0	0.0	173.4	0.0	173.4
I-07/02/76	00:36	0.8	24.5	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:36	-9.9	24.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/02/76	01:19	0.9	24.1	990.	9.01	0.0	0.0	0.0	0.0	0.0
D-07/02/76	01:19	-9.9	24.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	16:31	0.6	26.1	210.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/06/76	16:31	-9.9	33.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:12	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:12	-9.9	34.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:54	0.9	25.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:54	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:35	1.0	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:35	-9.9	34.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:15	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:15	-9.9	34.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:57	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:57	-9.9	34.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:38	0.8	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:38	-9.9	35.0	-9999.	20.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:19	0.5	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	21:19	-9.9	34.5	-9999.	17.10	0.0	0.0	58.5	0.0	58.5

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/06/76	22:48	0.2	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/06/76	22:48	-9.9	34.5	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/06/76	23:31	0.2	25.4	210.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	23:31	-9.9	33.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:12	-0.1	25.5	-9999.	7.46	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:12	-9.9	32.0	-9999.	18.00	0.0	0.0	55.6	0.0	55.6
I-07/07/76	00:51	0.0	25.5	210.	3.04	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:51	-9.9	30.0	-9999.	15.30	0.0	0.0	130.7	0.0	130.7
I-07/07/76	16:52	0.5	25.8	180.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/07/76	16:52	-9.9	34.5	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/07/76	17:32	0.8	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:32	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	18:13	0.9	26.0	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:13	-9.9	34.5	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/07/76	18:52	1.0	26.0	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:52	-9.9	34.5	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:31	1.0	26.0	-9999.	14.89	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:31	-9.9	34.5	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:10	1.0	25.5	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/07/76	20:10	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:49	0.9	26.0	-9999.	10.05	0.0	0.0	99.5	0.0	99.5
D-07/07/76	20:49	-9.9	34.5	-9999.	18.50	0.0	0.0	108.1	0.0	108.1
I-07/07/76	21:29	0.8	24.8	270.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:29	-9.9	34.5	-9999.	17.30	0.0	0.0	115.6	0.0	115.6
I-07/07/76	22:45	0.5	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/07/76	22:45	-9.9	34.5	-9999.	17.70	0.0	0.0	169.5	0.0	169.5
I-07/07/76	23:24	0.4	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:24	-9.9	33.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	00:04	0.2	25.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:04	-9.9	32.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/08/76	00:40	0.1	23.4	1040.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:40	-9.9	30.5	-9999.	16.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	16:32	0.1	26.0	195.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	16:32	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:14	0.3	25.2	190.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:14	-9.9	35.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:51	0.4	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:51	-9.9	35.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:29	0.7	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:29	-9.9	35.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:08	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:08	-9.9	35.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:47	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:47	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:23	1.0	25.5	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/08/76	20:23	-9.9	35.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:11	1.0	24.8	110.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:11	-9.9	34.0	-9999.	16.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	22:48	0.8	25.5	-9999.	9.18	0.0	0.0	653.4	108.9	762.3
D-07/08/76	22:48	-9.9	34.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:25	0.5	25.5	-9999.	7.03	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:25	-9.9	32.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:13	0.3	25.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:13	-9.9	30.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:50	0.2	25.5	-9999.	6.78	0.0	0.0	442.5	0.0	442.5
D-07/09/76	00:50	-9.9	30.0	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/12/76	16:36	0.0	25.4	255.	5.27	0.0	0.0	0.0	0.0	0.0
D-07/12/76	16:36	-9.9	34.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:15	-0.2	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:15	-9.9	35.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/12/76	17:56	-0.2	26.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:56	-9.9	35.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:41	-0.3	26.0	-9999.	6.02	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:41	-9.9	34.5	-9999.	16.40	0.0	0.0	61.0	0.0	61.0
I-07/12/76	19:23	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:23	-9.9	32.0	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:06	-0.5	26.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/12/76	20:06	-9.9	31.0	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/12/76	21:53	0.7	25.1	250.	8.72	0.0	0.0	0.0	0.0	0.0
D-07/12/76	21:53	-9.9	30.0	-9999.	18.80	0.0	0.0	0.0	0.0	0.0
I-07/12/76	22:36	0.8	26.0	-9999.	9.18	0.0	0.0	326.7	108.9	435.6
D-07/12/76	22:36	-9.9	30.3	-9999.	18.00	0.0	0.0	0.0	166.7	166.7
I-07/12/76	23:19	0.9	26.0	-9999.	9.27	0.0	0.0	107.9	107.9	215.8
D-07/12/76	23:19	-9.9	30.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/13/76	00:03	1.0	26.0	-9999.	9.44	0.0	0.0	105.9	105.9	211.8
D-07/13/76	00:03	-9.9	29.0	-9999.	17.80	0.0	0.0	0.0	56.2	56.2
I-07/13/76	00:47	0.9	24.9	250.	9.44	0.0	0.0	0.0	105.9	105.9
D-07/13/76	00:47	-9.9	29.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/13/76	16:38	0.0	24.3	250.	2.31	0.0	0.0	0.0	0.0	0.0
D-07/13/76	16:38	-9.9	32.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:18	-0.1	25.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:18	-9.9	32.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:55	-0.2	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:55	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:37	-0.2	25.0	-9999.	5.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:37	-9.9	32.0	-9999.	14.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:18	-0.2	25.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:18	-9.9	30.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:57	0.2	25.0	-9999.	5.77	0.0	0.0	173.4	0.0	173.4
D-07/13/76	20:57	-9.9	30.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/13/76	21:34	0.4	25.0	-9999.	7.55	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:34	-9.9	30.0	-9999.	16.40	0.0	0.0	61.0	0.0	61.0
I-07/13/76	22:12	0.6	23.0	283.	9.13	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:12	-9.9	29.5	-9999.	17.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:52	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:52	-9.9	30.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:31	0.9	25.0	-9999.	8.15	0.0	0.0	0.0	122.8	122.8
D-07/13/76	23:31	-9.9	29.0	-9999.	18.90	0.0	0.0	52.9	0.0	52.9
I-07/14/76	00:09	1.0	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:09	-9.9	29.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:47	1.1	25.0	240.	8.49	0.0	0.0	117.8	235.6	353.4
D-07/14/76	00:47	-9.9	29.0	-9999.	17.10	0.0	0.0	58.5	0.0	58.5
I-07/14/76	16:28	0.3	24.2	240.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/14/76	16:28	-9.9	34.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:09	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:09	-9.9	34.0	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:54	0.0	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:54	-9.9	33.5	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:34	-0.1	25.0	-9999.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:34	-9.9	33.5	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:13	-0.2	25.0	-9999.	3.89	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:13	-9.9	32.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:56	-0.2	25.0	-9999.	4.85	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:56	-9.9	32.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:31	0.2	24.4	220.	6.61	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:31	-9.9	31.0	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-07/14/76	22:09	0.4	25.0	-9999.	5.94	0.0	0.0	0.0	168.5	168.5
D-07/14/76	22:09	-9.9	31.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:51	0.5	25.0	-9999.	8.32	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:51	-9.9	31.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	23:35	0.7	25.0	-9999.	8.84	0.0	0.0	0.0	113.2	113.2
D-07/14/76	23:35	-9.9	31.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:14	0.8	25.0	-9999.	9.44	0.0	0.0	0.0	105.9	105.9
D-07/15/76	00:14	-9.9	30.0	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:59	0.9	24.2	230.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:59	-9.9	30.0	-9999.	17.70	0.0	0.0	0.0	0.0	0.0
I-07/15/76	16:34	0.5	25.1	230.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	16:36	-9.9	35.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:15	0.3	25.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:15	-9.9	35.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:01	0.1	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:01	-9.9	35.5	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:40	0.1	25.0	-9999.	5.10	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:40	-9.9	34.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:18	0.0	25.0	-9999.	4.44	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:18	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:38	-0.8	26.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	-9.9	33.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:35	0.0	25.9	190.	2.88	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:35	-9.9	33.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:13	0.2	26.0	-9999.	6.27	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:13	-9.9	33.5	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:51	0.4	26.0	-9999.	5.77	0.0	0.0	0.0	173.4	173.4
D-07/15/76	22:51	-9.9	33.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:30	0.8	26.0	-9999.	6.78	0.0	0.0	0.0	147.5	147.5
D-07/15/76	23:30	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:12	0.8	26.0	-9999.	7.63	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:12	-9.9	32.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:50	0.8	25.8	185.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:50	-9.9	32.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/27/76	19:00	-0.1	24.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:00	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/27/76	19:42	0.2	24.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:42	-9.9	33.5	-9999.	16.30	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:22	0.5	24.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:22	-9.9	34.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0
I-07/27/76	21:01	0.6	24.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/27/76	21:01	-9.9	33.5	-9999.	17.10	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:36	0.9	24.5	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/27/76	22:36	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/27/76	23:17	1.0	24.5	7190.	11.29	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:17	-9.9	33.5	-9999.	18.40	0.0	0.0	0.0	54.3	54.3
I-07/28/76	00:01	0.9	24.5	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:01	-9.9	33.5	-9999.	18.00	0.0	0.0	0.0	55.6	55.6
I-07/28/76	00:43	0.8	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:43	-9.9	33.5	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	16:44	-0.1	24.5	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	16:44	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:25	-0.2	24.5	-9999.	4.02	0.0	0.0	0.0	0.0	0.0
D-07/28/76	17:25	-9.9	34.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:09	-0.3	25.0	-9999.	1.43	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:09	-9.9	34.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:56	-0.3	24.5	-9999.	2.47	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:56	-9.9	34.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:38	-0.1	24.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:38	-9.9	34.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:21	0.2	24.7	6880.	5.35	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:21	-9.9	34.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:03	0.4	25.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	21:03	-9.9	34.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/28/76	22:40	0.8	25.1	6890.	9.70	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:40	-9.9	34.0	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:24	1.0	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:24	-9.9	34.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:05	1.0	25.0	-9999.	9.68	0.0	0.0	0.0	0.0	0.0
D-07/29/76	00:05	-9.9	34.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:44	0.9	24.9	6810.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	00:44	-9.9	34.0	-9999.	17.80	0.0	0.0	0.0	112.4	112.4
I-07/29/76	16:34	0.3	25.0	-9999.	6.70	0.0	0.0	0.0	0.0	0.0
D-07/29/76	16:34	-9.9	34.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/29/76	17:25	0.0	25.0	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-07/29/76	17:25	-9.9	33.0	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:10	-0.2	25.0	-9999.	4.27	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:10	-9.9	34.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:02	-0.2	25.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:02	-9.9	33.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:41	-0.2	24.5	-9999.	3.75	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:41	-9.9	34.0	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:25	0.1	25.0	6020.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:25	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	65.4	65.4
I-07/29/76	22:22	0.7	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	22:22	-9.9	33.5	-9999.	17.90	0.0	0.0	0.0	55.9	55.9
I-07/29/76	23:00	0.8	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:00	-9.9	33.5	-9999.	16.90	0.0	0.0	0.0	0.0	0.0
I-07/29/76	23:41	0.9	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:41	-9.9	33.0	-9999.	18.70	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:30	1.0	24.5	6010.	11.29	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:30	-9.9	31.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/26/76	22:13	0.9	16.4	160.	19.05	0.0	0.0	0.0	0.0	0.0
D-05/26/76	22:13	-9.9	22.5	-9999.	11.70	0.0	0.0	85.5	0.0	85.5
I-05/26/76	23:36	0.7	16.0	-9999.	17.78	0.0	0.0	0.0	0.0	0.0
D-05/26/76	23:36	-9.9	20.0	-9999.	11.20	0.0	0.0	0.0	0.0	0.0
I-05/27/76	01:02	0.3	16.2	160.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/27/76	01:02	-9.9	19.5	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/02/76	21:03	0.0	17.0	190.	17.78	0.0	0.0	0.0	0.0	0.0
D-06/02/76	21:05	-9.9	24.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/02/76	22:25	0.4	17.0	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/02/76	22:25	-9.9	22.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/02/76	23:57	0.8	17.4	175.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/02/76	23:57	-9.9	20.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	01:15	1.1	17.0	180.	16.85	0.0	0.0	0.0	0.0	0.0
D-06/03/76	01:15	-9.9	20.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	17:12	0.5	17.3	180.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/03/76	17:13	-9.9	24.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	18:12	0.2	17.5	-9999.	18.25	0.0	0.0	0.0	0.0	0.0
D-06/03/76	18:12	-9.9	25.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	19:07	0.1	17.0	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/03/76	19:07	-9.9	25.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	19:58	-0.1	17.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
D-06/03/76	19:58	-0.2	24.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	21:17	-0.2	17.2	175.	15.45	0.0	0.0	0.0	0.0	0.0
D-06/03/76	21:17	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	22:17	-0.2	17.0	-9999.	21.07	0.0	0.0	0.0	0.0	0.0
D-06/03/76	22:17	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/03/76	23:13	-0.2	18.0	-9999.	19.71	0.0	0.0	0.0	0.0	0.0
D-06/03/76	23:13	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/04/76	00:07	0.4	17.0	-9999.	21.07	0.0	0.0	0.0	0.0	0.0
D-06/04/76	00:07	-9.9	21.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/08/76	20:48	1.1	18.9	160.	14.06	0.0	0.0	0.0	0.0	0.0
D-06/08/76	20:48	-9.9	28.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	22:26	0.6	19.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	22:26	-9.9	28.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-06/08/76	23:13	0.3	18.8	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	23:15	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:04	0.2	18.6	150.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:04	-9.9	23.5	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:48	0.0	18.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:48	-9.9	22.5	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	17:15	0.0	19.2	160.	8.07	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:15	-9.9	24.5	-9999.	13.28	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:10	0.5	19.0	-9999.	10.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:10	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:59	0.8	19.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:59	-9.9	29.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	19:49	0.9	19.3	160	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	19:49	-9.9	27.5	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-06/09/76	20:39	1.0	19.2	140.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:39	-9.9	28.0	-9999.	14.13	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:27	1.0	19.0	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:27	-9.9	27.2	-9999.	17.43	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:04	0.8	19.0	160.	11.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:04	-9.9	28.0	-9999.	14.42	0.0	0.0	69.3	0.0	69.3
I-06/09/76	23:49	0.7	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:49	-9.9	29.0	-9999.	13.85	72.2	0.0	0.0	0.0	0.0
I-06/10/76	00:43	0.3	18.8	160.	7.51	0.0	0.0	0.0	0.0	0.0
D-06/10/76	00:43	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	17:08	-0.3	19.2	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:08	-9.9	29.0	-9999.	12.36	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	17:55	0.1	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:55	-9.9	29.0	-9999.	13.56	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:41	0.5	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:41	-9.9	29.5	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	19:20	0.6	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	19:20	-9.9	29.0	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:06	0.8	19.7	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:06	-9.9	29.0	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:54	1.0	19.8	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:54	-9.9	29.5	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	22:20	0.9	19.8	-9999.	19.05	0.0	0.0	0.0	0.0	0.0
D-06/10/76	22:30	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	23:12	0.9	20.0	-9999.	23.22	0.0	0.0	0.0	0.0	0.0
D-06/10/76	23:12	-9.9	28.5	-9999.	13.85	361.1	0.0	0.0	0.0	0.0
I-06/10/76	24:00	0.9	19.8	-9999.	19.22	0.0	0.0	0.0	0.0	0.0
D-06/10/76	24:00	-9.9	26.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:50	0.4	19.6	160.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:50	-9.9	25.0	-9999.	15.09	0.0	0.0	0.0	0.0	0.0
I-06/11/76	17:00	0.0	19.4	210.	11.76	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:00	-9.9	29.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	17:55	-0.2	19.5	-9999.	5.28	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:55	-9.9	29.0	-9999.	10.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	18:40	-0.3	19.0	-9999.	6.34	0.0	0.0	0.0	0.0	0.0
D-06/14/76	18:40	-9.9	29.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/14/76	19:29	-0.4	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/14/76	19:29	-9.9	29.0	-9999.	11.50	0.0	87.0	0.0	0.0	87.0
I-06/14/76	20:17	-0.4	19.5	-9999.	8.51	0.0	0.0	117.5	0.0	117.5
D-06/14/76	20:17	-9.9	29.0	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-06/14/76	21:09	0.0	19.5	210.	6.29	0.0	0.0	0.0	0.0	0.0
D-06/14/76	21:09	-9.9	29.0	-9999.	9.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	22:43	0.5	19.5	-9999.	9.12	0.0	0.0	0.0	0.0	0.0
D-06/24/76	22:43	-9.9	27.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	23:30	0.7	19.5	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-06/14/76	23:30	-9.9	26.0	-9999.	11.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	00:14	0.8	19.5	-9999.	11.88	0.0	0.0	0.0	0.0	0.0
D-06/15/76	00:14	-9.9	26.0	-9999.	11.70	170.9	0.0	0.0	0.0	0.0
I-06/15/76	01:01	0.9	19.5	190.	11.64	0.0	0.0	0.0	0.0	0.0
D-06/15/76	01:01	-9.9	25.5	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	16:58	0.1	19.9	200.	6.67	0.0	0.0	0.0	0.0	0.0
D-06/15/76	16:58	-9.9	30.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/15/76	17:52	0.0	20.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/15/76	17:52	-9.9	30.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-06/15/76	18:37	-0.1	20.0	-9999.	12.94	0.0	0.0	0.0	0.0	0.0
D-06/15/76	18:37	-9.9	30.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	19:26	-0.3	20.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/15/76	19:26	-9.9	30.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-06/15/76	20:16	-0.4	20.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/15/76	20:16	-9.9	30.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-06/15/76	21:38	-0.2	20.0	-9999.	12.81	0.0	0.0	0.0	0.0	0.0
D-06/15/76	21:38	-9.9	30.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-06/15/76	22:27	-0.1	20.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/15/76	22:27	-9.9	30.0	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/15/76	23:13	0.4	20.2	190.	15.03	0.0	0.0	0.0	0.0	0.0
D-06/15/76	23:13	-9.9	30.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-06/16/76	00:02	0.6	20.0	-9999.	15.53	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:02	-9.9	29.0	-9999.	17.90	0.0	0.0	0.0	0.0	0.0
I-06/16/76	00:47	0.7	20.0	180.	13.46	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:47	-9.9	28.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-06/16/76	16:24	0.6	20.5	190.	9.76	0.0	0.0	0.0	0.0	0.0
D-06/16/76	16:24	-9.9	31.0	-9999.	16.90	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/16/76	17:11	0.4	21.0	-9999.	8.22	0.0	0.0	121.7	0.0	121.7
D-06/16/76	17:11	-9.9	30.5	-9999.	16.60	60.2	0.0	0.0	0.0	0.0
I-06/16/76	18:03	0.1	21.0	-9999.	7.79	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:03	-9.9	31.0	-9999.	14.90	67.1	0.0	0.0	0.0	0.0
I-06/16/76	19:02	0.0	21.0	-9999.	4.15	0.0	0.0	0.0	0.0	0.0
D-06/16/76	19:02	-9.9	28.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-06/16/76	19:50	-0.1	20.0	-9999.	10.14	0.0	0.0	295.9	0.0	295.9
D-06/16/76	19:50	-9.9	28.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-06/16/76	20:42	-0.3	20.1	190.	7.15	0.0	0.0	139.9	0.0	139.9
D-06/16/76	20:42	-9.9	24.5	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-06/16/76	21:29	-0.2	20.0	-9999.	4.92	0.0	0.0	0.0	0.0	0.0
D-06/16/76	21:29	-9.9	24.0	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-06/16/76	23:05	0.0	20.0	-9999.	7.84	0.0	0.0	0.0	0.0	0.0
D-06/16/76	23:05	-9.9	21.5	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/16/76	23:53	0.4	20.0	-9999.	10.25	0.0	0.0	0.0	0.0	0.0
D-06/16/76	23:53	-9.9	21.0	-9999.	15.00	0.0	0.0	133.3	0.0	133.3
I-06/17/76	16:33	0.6	20.8	180.	17.47	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:33	-9.9	22.0	-9999.	19.40	0.0	0.0	0.0	0.0	0.0
I-06/17/76	17:19	0.5	21.0	-9999.	15.10	0.0	0.0	66.2	0.0	66.2
D-06/17/76	17:19	-9.9	22.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:05	0.2	21.0	-9999.	15.10	0.0	0.0	66.2	0.0	66.2
D-06/17/76	18:05	-9.9	22.5	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:49	0.1	21.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:49	-9.9	22.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/17/76	19:35	0.0	21.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	19:35	-9.9	22.0	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/17/76	20:23	-0.2	20.5	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	20:23	-9.9	21.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/17/76	21:08	-0.2	20.6	175.	7.97	0.0	0.0	0.0	0.0	0.0
D-06/17/76	21:08	-9.9	21.0	-9999.	14.10	0.0	0.0	70.9	0.0	70.9

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:38	-0.3	20.5	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/17/76	22:38	-9.9	21.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/17/76	23:23	-0.1	21.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:23	-9.9	21.0	-9999.	14.00	285.7	0.0	0.0	0.0	0.0
I-06/18/76	00:10	0.1	20.5	-9999.	8.84	0.0	0.0	113.2	0.0	113.2
D-06/18/76	00:10	-9.9	21.0	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/18/76	00:55	0.4	21.0	170.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:55	-9.9	21.0	-9999.	15.90	125.8	0.0	0.0	0.0	0.0
I-06/21/76	16:40	0.5	24.0	140.	7.29	0.0	0.0	0.0	0.0	0.0
D-06/21/76	16:40	-9.9	33.0	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/21/76	17:27	0.7	24.5	151.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	17:27	-9.9	32.5	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	18:15	0.8	23.0	150.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/21/76	18:15	-9.9	32.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:03	0.8	26.0	150.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:03	-9.9	32.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:48	0.8	25.0	150.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:48	-9.9	32.5	-9999.	12.70	0.0	0.0	78.7	0.0	78.7
I-06/21/76	20:30	0.6	25.5	150.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/21/76	20:30	-9.9	32.5	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-06/21/76	21:17	0.5	25.0	160.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/21/76	21:17	-9.9	32.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	23:11	0.3	22.8	170.	2.80	0.0	0.0	0.0	0.0	0.0
D-06/21/76	23:11	-9.9	28.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/21/76	23:56	0.2	25.0	250.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/21/76	23:56	-9.9	28.0	-9999.	10.40	0.0	0.0	96.2	0.0	96.2
I-06/22/76	00:41	0.0	22.5	350.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	00:41	-9.9	28.0	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/22/76	16:37	0.4	23.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-06/22/76	16:37	-9.9	33.0	-9999.	10.80	0.0	0.0	92.6	0.0	92.6

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	17:25	0.5	22.8	240.	5.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	17:25	-9.9	33.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/22/76	18:10	0.7	23.0	-9999.	5.18	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:10	-9.9	33.0	-9999.	11.60	0.0	0.0	86.2	0.0	86.2
I-06/22/76	18:57	0.7	23.0	-9999.	6.10	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:57	-9.9	33.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/22/76	19:44	0.7	23.0	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/22/76	19:44	-9.9	33.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/22/76	20:36	0.7	23.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	20:36	-9.9	33.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/22/76	21:23	0.6	22.5	260.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/22/76	21:23	-9.9	33.0	-9999.	11.20	0.0	0.0	0.0	0.0	0.0
I-06/22/76	22:59	0.8	22.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	22:59	-9.9	33.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/22/76	23:46	0.2	22.5	-9999.	1.67	0.0	0.0	598.9	0.0	598.9
D-06/22/76	23:46	-9.9	32.0	-9999.	10.40	0.0	0.0	96.2	0.0	96.2
I-06/23/76	00:37	0.1	22.5	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/23/76	00:37	-9.9	32.0	-9999.	9.90	0.0	0.0	0.0	0.0	0.0
I-06/23/76	01:19	-0.1	22.4	260.	1.35	0.0	0.0	0.0	0.0	0.0
D-06/23/76	01:19	-9.9	31.0	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:12	0.1	23.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:12	-9.9	33.0	-9999.	11.00	0.0	0.0	90.9	0.0	90.9
I-06/23/76	16:59	0.2	22.4	450.	4.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:59	-9.9	33.0	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	17:45	0.5	22.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:45	-9.9	33.5	-9999.	10.80	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:28	0.6	23.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:28	-9.9	33.5	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:15	0.8	22.0	400.	6.70	0.0	0.0	149.4	0.0	149.4
D-06/23/76	19:15	-9.9	33.5	-9999.	11.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	20:01	0.8	23.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-06/23/76	20:01	-9.9	33.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/23/76	20:45	0.8	23.0	-9999.	13.62	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:45	-9.9	33.5	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:28	0.8	22.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	21:29	-9.9	33.0	-9999.	11.70	0.0	0.0	85.5	0.0	85.5
I-06/23/76	23:02	-9.9	23.0	420.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:02	-9.9	33.0	-9999.	11.50	0.0	0.0	173.9	0.0	173.9
I-06/23/76	23:48	0.4	22.5	460.	5.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:48	-9.9	33.0	-9999.	10.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	00:31	0.1	22.5	600.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/24/76	00:31	-9.9	33.0	-9999.	11.20	0.0	0.0	0.0	0.0	0.0
I-06/24/76	01:09	0.0	23.0	750.	2.80	0.0	0.0	357.3	0.0	357.3
D-06/24/76	01:09	-9.9	33.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/24/76	16:30	-0.3	23.5	770.	0.32	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:20	-9.9	34.0	-9999.	11.70	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:07	0.0	23.6	815.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:07	-9.9	34.0	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:52	0.2	23.5	-9999.	5.85	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:52	-9.9	34.0	-9999.	13.00	0.0	0.0	0.0	0.0	0.0
I-06/24/76	18:38	0.5	23.0	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:38	-9.9	33.8	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:30	0.7	23.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:30	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	20:18	0.8	23.0	-9999.	6.86	0.0	0.0	0.0	0.0	0.0
D-06/24/76	20:18	-9.9	34.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:04	0.8	23.1	790.	8.49	0.0	0.0	0.0	0.0	0.0
D-06/24/76	21:04	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:55	0.8	23.5	-9999.	7.72	0.0	0.0	0.0	0.0	0.0
D-06/24/76	21:55	-9.9	33.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	23:30	0.5	23.0	-9999.	6.19	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:30	-9.9	33.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/25/76	00:17	0.3	23.0	-9999.	5.60	0.0	0.0	178.5	0.0	178.5
D-06/25/76	00:17	-9.9	32.5	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/25/76	01:00	0.2	23.0	960.	5.02	0.0	0.0	0.0	0.0	0.0
D-06/25/76	01:00	-9.9	33.0	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/28/76	16:30	-0.1	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/28/76	16:30	-9.9	34.0	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-06/28/76	17:24	-0.2	24.0	2210.	1.59	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:24	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:13	-0.4	24.0	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:13	-9.9	34.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:02	-0.1	24.0	-9999.	2.64	0.0	0.0	379.3	0.0	379.3
D-06/28/76	19:02	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:55	0.2	24.5	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:55	-9.9	35.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:46	0.4	24.5	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:46	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	22:52	0.9	24.1	2170.	9.36	0.0	0.0	106.9	0.0	106.9
D-06/28/76	22:52	-9.9	34.5	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/28/76	23:42	1.0	24.5	-9999.	10.01	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:42	-9.9	34.5	-9999.	12.70	0.0	0.0	78.7	0.0	78.7
I-06/29/76	00:30	0.9	24.0	-9999.	7.97	0.0	0.0	250.8	0.0	250.8
D-06/29/76	00:30	-9.9	34.5	-9999.	13.40	0.0	0.0	74.6	0.0	74.6
I-06/29/76	01:11	0.8	24.0	2080.	7.72	0.0	0.0	0.0	0.0	0.0
D-06/29/76	01:11	-9.9	33.5	-9999.	13.10	0.0	0.0	76.3	0.0	76.3
I-06/29/76	19:55	-0.1	24.0	1940.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:55	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:40	0.2	24.0	-9999.	10.99	0.0	0.0	91.0	0.0	91.0
D-06/29/76	20:40	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	21:27	0.5	24.0	1800.	6.78	0.0	0.0	295.0	0.0	295.0
D-06/29/76	21:27	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:15	0.7	24.0	-9999.	9.18	0.0	0.0	217.8	0.0	217.8
D-06/29/76	22:15	-9.9	34.0	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:58	0.9	24.0	-9999.	7.80	0.0	0.0	384.5	0.0	384.5
D-06/29/76	22:58	-9.9	34.0	-9999.	13.80	0.0	0.0	144.9	0.0	144.9
I-06/29/76	23:41	1.0	24.0	-9999.	10.05	0.0	0.0	298.4	0.0	298.4
D-06/29/76	23:41	-9.9	33.0	2050.	13.80	0.0	0.0	72.5	0.0	72.5
I-06/30/76	00:28	1.0	24.0	-9999.	12.90	0.0	0.0	155.0	0.0	155.0
D-06/30/76	00:28	-9.9	33.0	-9999.	16.50	0.0	0.0	121.2	0.0	121.2
I-06/30/76	01:10	1.0	23.8	1940.	9.18	0.0	0.0	435.6	0.0	435.6
D-06/30/76	01:10	-9.9	32.0	-9999.	13.10	0.0	0.0	152.7	0.0	152.7
I-06/30/76	17:13	0.2	23.8	1670.	4.93	0.0	0.0	202.7	0.0	202.7
D-06/30/76	17:13	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:17	0.2	24.0	-9999.	3.70	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:17	-9.9	34.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:07	0.5	23.8	1500.	5.55	0.0	0.0	360.6	0.0	360.6
D-06/30/76	22:07	-9.9	34.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:54	0.8	24.0	-9999.	7.46	0.0	0.0	134.0	0.0	134.0
D-06/30/76	22:54	-9.9	34.0	-9999.	12.20	0.0	0.0	82.0	0.0	82.0
I-06/30/76	23:40	0.9	23.5	-9999.	8.75	0.0	0.0	342.9	0.0	342.9
D-06/30/76	23:40	-9.9	34.0	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-07/01/76	00:40	1.1	23.6	1570.	8.49	0.0	0.0	117.8	0.0	117.8
D-07/01/76	00:40	-9.9	34.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-07/01/76	17:32	0.3	24.1	1360.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:32	-9.9	25.0	-9999.	16.90	0.0	0.0	59.2	0.0	59.2
I-07/01/76	18:17	0.2	24.0	-9999.	4.52	0.0	0.0	221.3	0.0	221.3
D-07/01/76	18:17	-9.9	25.0	-9999.	15.90	0.0	0.0	125.8	0.0	125.8
I-07/01/76	19:08	0.1	24.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:08	-9.9	24.5	-9999.	17.10	0.0	0.0	117.0	0.0	117.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	19:55	0.0	24.0	-9999.	7.55	0.0	0.0	530.1	0.0	530.1
D-07/01/76	19:55	-9.9	24.5	-9999.	16.00	0.0	0.0	187.5	0.0	187.5
I-07/01/76	20:45	0.0	24.3	1100.	6.70	0.0	0.0	149.4	0.0	149.4
D-07/01/76	20:45	-9.9	24.5	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:33	0.1	24.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:33	-9.9	24.5	-9999.	16.10	0.0	0.0	62.1	0.0	62.1
I-07/01/76	23:07	0.6	24.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:07	-9.9	24.5	-9999.	16.60	0.0	0.0	241.0	0.0	241.0
I-07/01/76	23:52	0.8	24.0	-9999.	7.29	0.0	0.0	137.2	0.0	137.2
D-07/01/76	23:52	-9.9	24.5	-9999.	17.30	0.0	0.0	173.4	0.0	173.4
I-07/02/76	00:36	0.8	24.5	-9999.	7.80	0.0	0.0	256.3	0.0	256.3
D-07/02/76	00:36	-9.9	24.0	-9999.	17.60	0.0	0.0	113.6	0.0	113.6
I-07/02/76	01:19	0.9	24.1	990.	9.01	0.0	0.0	222.0	0.0	222.0
D-07/02/76	01:19	-9.9	24.5	-9999.	18.60	0.0	0.0	53.8	0.0	53.8
I-07/06/76	16:31	0.6	26.1	210.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/06/76	16:31	-9.9	33.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:12	0.8	26.0	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/06/76	17:12	-9.9	34.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:54	0.9	25.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:54	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:35	1.0	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:35	-9.9	34.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:15	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:15	-9.9	34.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:57	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:57	-9.9	34.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:38	0.8	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:38	-9.9	35.0	-9999.	20.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:19	0.5	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	21:19	-9.9	34.5	-9999.	17.10	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/06/76	22:48	0.2	25.5	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/06/76	22:48	-9.9	34.5	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/06/76	23:31	0.2	25.4	210.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	23:31	-9.9	33.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:12	-0.1	25.5	-9999.	7.46	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:12	-9.9	32.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/07/76	00:51	0.0	25.5	210.	3.04	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:51	-9.9	30.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/07/76	16:52	0.5	25.8	180.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/07/76	16:52	-9.9	34.5	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/07/76	17:32	0.8	24.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:32	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	18:13	0.9	26.0	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:13	-9.9	34.5	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/07/76	18:52	1.0	26.0	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:52	-9.9	34.5	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:31	1.0	26.0	-9999.	14.89	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:31	-9.9	34.5	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:10	1.0	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/07/76	20:10	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:49	0.9	26.0	-9999.	10.05	0.0	0.0	0.0	0.0	0.0
D-07/07/76	20:49	-9.9	34.5	-9999.	18.50	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:29	0.8	24.8	270.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:29	-9.9	34.5	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/07/76	22:45	0.5	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/07/76	22:45	-9.9	34.5	-9999.	17.70	0.0	0.0	56.5	0.0	56.5
I-07/07/76	23:24	0.4	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:24	-9.9	33.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	00:04	0.2	25.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	09:04	-9.9	32.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/08/76	00:40	0.1	23.4	1040.	5.02	0.0	0.0	199.3	0.0	199.3
D-07/08/76	00:40	-9.9	30.5	-9999.	16.50	0.0	0.0	60.6	0.0	60.6
I-07/08/76	16:32	0.1	26.0	195.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	16:32	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:14	0.3	25.2	190.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:14	-9.9	35.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:51	0.6	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:51	-9.9	35.0	-9999.	16.80	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:29	0.7	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:29	-9.9	35.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:08	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:08	-9.9	35.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:47	0.9	26.0	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/08/76	19:47	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:23	1.0	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	20:23	-9.9	35.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:11	1.0	24.8	110.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:11	-9.9	34.0	-9999.	16.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	22:48	0.8	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	22:48	-9.9	34.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
I-07/09/76	23:25	0.5	25.5	-9999.	7.03	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:25	-9.9	32.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:13	0.3	25.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:13	-9.9	30.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:50	0.2	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:50	-9.9	30.0	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/12/76	16:36	0.0	25.4	255.	5.27	0.0	0.0	0.0	0.0	0.0
D-07/12/76	16:36	-9.9	34.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:15	-0.2	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:15	-9.9	35.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/12/76	17:56	-0.2	26.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:56	-9.9	35.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:41	-0.3	26.0	-9999.	6.02	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:41	-9.9	34.5	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:23	-0.5	26.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/12/76	19:23	-9.9	32.0	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:06	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:06	-9.9	31.0	-9999.	16.20	0.0	0.0	61.7	0.0	61.7
I-07/12/76	21:53	0.7	25.1	250.	8.72	0.0	0.0	0.0	0.0	0.0
D-07/12/76	21:53	-9.9	30.0	-9999.	18.80	0.0	0.0	0.0	0.0	0.0
I-07/12/76	22:36	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	108.9	108.9
D-07/12/76	22:36	-9.9	30.3	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/12/76	23:19	0.9	26.0	-9999.	9.27	0.0	0.0	107.9	0.0	107.9
D-07/12/76	23:19	-9.9	30.0	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-07/13/76	00:03	1.0	26.0	-9999.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:03	-9.9	29.0	-9999.	17.80	0.0	0.0	0.0	56.2	56.2
I-07/13/76	00:47	0.9	24.9	250.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:47	-9.9	29.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/13/76	16:38	0.0	24.3	250.	2.31	0.0	0.0	0.0	0.0	0.0
D-07/13/76	16:38	-9.9	32.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:18	-0.1	25.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:18	-9.9	32.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:55	-0.2	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:55	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:37	-0.2	25.0	-9999.	5.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:37	-9.9	32.0	-9999.	14.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:18	-0.2	25.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:18	-9.9	30.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:57	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:57	-9.9	30.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/13/76	21:34	0.4	25.0	-9999.	7.55	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:34	-9.9	30.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/13/76	22:12	0.6	23.0	233.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:12	-9.9	29.5	-9999.	17.70	0.0	0.0	56.5	0.0	56.5
I-07/13/76	22:52	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	108.9	108.9
D-07/13/76	22:52	-9.9	30.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/13/76	23:31	0.9	25.0	-9999.	8.15	0.0	0.0	122.8	0.0	122.8
D-07/13/76	23:31	-9.9	29.0	-9999.	18.90	0.0	0.0	0.0	211.6	211.6
I-07/13/76	00:09	1.0	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:09	-9.9	29.0	-9999.	18.30	0.0	0.0	54.6	0.0	54.6
I-07/14/76	00:47	1.1	25.0	240.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:47	-9.9	29.0	-9999.	17.10	0.0	0.0	0.0	0.0	0.0
I-07/14/76	16:28	0.3	24.2	240.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/14/76	16:28	-9.9	34.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:09	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:09	-9.9	34.0	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:54	0.0	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:54	-9.9	33.5	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:34	-0.1	25.0	-9999.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:34	-9.9	33.5	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:13	-0.2	25.0	-9999.	3.89	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:13	-9.9	32.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:56	-0.2	25.0	-9999.	4.85	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:56	-9.9	32.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:31	0.2	24.4	220.	6.61	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:31	-9.9	31.0	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:09	0.4	25.0	-9999.	5.94	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:09	-9.9	31.0	-9999.	17.00	0.0	0.0	58.8	0.0	58.8
I-07/14/76	22:51	0.5	25.0	-9999.	8.32	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:51	-9.9	31.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	23:35	0.7	25.0	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:35	-9.9	31.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:14	0.8	25.0	-9999.	9.44	0.0	0.0	0.0	105.9	105.9
D-07/15/76	00:14	-9.9	30.0	-9999.	17.80	0.0	0.0	56.2	56.2	112.4
I-07/15/76	00:39	0.9	24.2	230.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:59	-9.9	30.0	-9999.	17.70	0.0	0.0	0.0	0.0	0.0
I-07/15/76	14:36	0.5	29.1	230.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	14:36	-9.9	35.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:15	0.3	25.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:15	-9.9	35.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:01	0.1	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:01	-9.9	35.5	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:40	0.1	25.0	-9999.	5.10	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:40	-9.9	34.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:18	0.0	25.0	-9999.	4.44	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:18	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	-0.8	26.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	-9.9	33.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:35	0.0	25.9	190.	2.88	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:35	-9.9	33.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:13	0.2	26.0	-9999.	6.27	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:13	-9.9	33.5	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:51	0.4	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:51	-9.9	33.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:30	0.8	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:30	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:12	0.8	26.0	-9999.	7.63	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:12	-9.9	32.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:50	0.8	25.8	185.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:50	-9.9	32.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/27/76	19:00	-0.1	24.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:00	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/27/76	19:42	0.2	24.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/27/76	19:42	-9.9	33.5	-9999.	16.30	0.0	0.0	0.0	0.0	0.0
I-07/27/76	20:22	0.5	24.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:22	-9.9	34.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0
I-07/27/76	21:01	0.6	24.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/27/76	21:01	-9.9	33.5	-9999.	17.10	0.0	0.0	0.0	0.0	0.0
I-07/27/76	22:36	0.9	24.5	-9999.	8.15	0.0	0.0	0.0	122.8	122.8
D-07/27/76	22:36	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	52.6	52.6
I-07/27/76	23:17	1.0	24.5	7190.	11.29	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:17	-9.9	33.5	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:01	0.9	24.5	-9999.	10.23	0.0	0.0	0.0	97.8	97.8
D-07/28/76	00:01	-9.9	33.5	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/28/76	00:43	0.8	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:43	-9.9	33.5	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	16:44	-0.1	24.5	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	16:44	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:25	-0.2	24.5	-9999.	4.02	0.0	0.0	0.0	0.0	0.0
D-07/28/76	17:25	-9.9	34.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:09	-0.3	25.0	-9999.	1.43	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:09	-9.9	34.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:56	-0.3	24.5	-9999.	2.47	0.0	0.0	0.0	0.0	0.0
D-07/28/76	18:56	-9.9	34.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	19:38	-0.1	24.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:38	-9.9	34.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-07/28/76	20:21	0.2	24.7	6880.	5.35	0.0	0.0	0.0	0.0	0.0
D-07/28/76	20:21	-9.9	34.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/28/76	21:03	0.4	25.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	21:03	-9.9	34.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/28/76	22:40	0.8	25.1	6890.	9.70	0.0	0.0	0.0	0.0	0.0
D-07/28/76	22:40	-9.9	34.0	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/28/76	23:24	1.0	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-07/28/76	23:24	-9.9	34.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:05	1.0	25.0	-9999.	9.88	0.0	0.0	0.0	202.4	202.4
D-07/29/76	00:05	-9.9	34.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-07/29/76	00:44	0.9	24.9	6810.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	00:44	-9.9	34.0	-9999.	17.80	0.0	0.0	0.0	56.2	56.2
I-07/29/76	16:34	0.8	25.0	-9999.	6.70	0.0	0.0	0.0	0.0	0.0
D-07/29/76	16:34	-9.9	34.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/29/76	17:25	0.0	25.0	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-07/29/76	17:25	-9.9	33.0	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-07/29/76	18:10	-0.2	25.0	-9999.	4.27	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:10	-9.9	34.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:02	-0.2	25.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:02	-9.9	33.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-07/29/76	19:41	-0.2	24.5	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/29/76	19:41	-9.9	34.0	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-07/29/76	20:25	0.1	25.0	6020.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/29/76	20:25	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/29/76	22:22	0.7	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	22:22	-9.9	33.5	-9999.	17.90	0.0	0.0	0.0	0.0	0.0
I-07/29/76	23:00	0.8	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:00	-9.9	33.5	-9999.	16.90	0.0	0.0	0.0	0.0	0.0
I-07/29/76	23:41	0.9	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	23:41	-9.9	33.0	-9999.	18.70	0.0	0.0	0.0	0.0	0.0
I-07/30/76	00:30	1.0	24.5	6010.	11.29	0.0	0.0	0.0	0.0	0.0
D-07/30/76	00:30	-9.9	31.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0

I=(NTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	23:30	0.5	23.0	-9999.	6.19	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:30	-9.9	33.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/25/76	00:17	0.3	23.0	-9999.	5.60	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:17	-9.9	32.5	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/25/76	01:00	0.2	23.0	960.	5.02	0.0	0.0	0.0	0.0	0.0
D-06/25/76	01:00	-9.9	33.0	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/28/76	16:30	-0.1	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/28/76	16:30	-9.9	34.0	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-06/28/76	17:24	-0.2	24.0	2210.	1.59	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:24	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:13	-0.4	24.0	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:13	-9.9	34.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:02	-0.1	24.0	-9999.	2.64	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:02	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:55	0.2	24.5	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:55	-9.9	33.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:46	0.4	24.5	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:46	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	22:52	0.9	24.1	2170.	9.36	0.0	0.0	0.0	0.0	0.0
D-06/28/76	22:52	-9.9	34.5	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/28/76	23:42	1.0	24.5	-9999.	10.01	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:42	-9.9	34.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/29/76	00:30	0.9	24.0	-9999.	7.97	0.0	0.0	0.0	0.0	0.0
D-06/29/76	00:30	-9.9	34.5	-9999.	13.40	0.0	0.0	149.3	0.0	149.3
I-06/29/76	01:11	0.8	24.0	2080.	7.72	0.0	0.0	1814.2	0.0	1814.2
D-06/29/76	01:11	-9.9	33.5	-9999.	13.10	0.0	0.0	76.3	0.0	76.3
I-06/29/76	19:55	-0.1	24.0	1940.	10.08	0.0	0.0	99.2	0.0	99.2
D-06/29/76	19:55	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:40	0.2	24.0	-9999.	10.99	0.0	0.0	91.0	0.0	91.0
D-06/29/76	20:40	-9.9	34.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D= DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	21:27	0.5	24.0	1800.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/29/76	21:27	-9.9	34.0	-9999.	11.40	0.0	0.0	175.4	0.0	175.4
I-06/29/76	22:15	0.7	24.0	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-06/29/76	22:15	-9.9	34.0	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:58	0.5	24.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:58	-9.9	34.0	-9999.	13.80	0.0	0.0	72.5	0.0	72.5
I-06/29/76	23:41	1.0	24.0	-9999.	10.05	0.0	0.0	895.1	0.0	895.1
D-06/29/76	23:41	-9.9	33.0	2050.	13.80	0.0	0.0	144.9	0.0	144.9
I-06/30/76	00:28	1.0	24.0	-9999.	12.90	0.0	0.0	697.9	0.0	697.9
D-06/30/76	00:28	-9.9	33.0	-9999.	16.50	0.0	0.0	242.4	0.0	242.4
I-06/30/76	01:10	1.0	23.8	1940.	9.18	0.0	0.0	653.4	0.0	653.4
D-06/30/76	01:10	-9.9	32.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/30/76	17:13	0.2	23.8	1670.	4.93	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:13	-9.9	34.0	-9999.	11.40	0.0	0.0	263.2	0.0	263.2
I-06/30/76	21:17	0.2	24.0	-9999.	3.70	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:17	-9.9	34.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:07	0.5	23.8	1500.	5.55	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:07	-9.9	34.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:54	0.8	24.0	-9999.	7.46	0.0	0.0	134.0	0.0	134.0
D-06/30/76	22:54	-9.9	34.0	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:40	0.9	23.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:40	-9.9	34.0	-9999.	12.60	0.0	0.0	79.4	0.0	79.4
I-07/01/76	00:40	1.1	23.6	1570.	8.49	0.0	0.0	824.5	0.0	824.5
D-07/01/76	00:40	-9.9	34.0	-9999.	13.10	0.0	0.0	152.7	0.0	152.7
I-07/01/76	17:32	0.3	24.1	1360.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:32	-9.9	25.0	-9999.	16.90	0.0	0.0	236.7	0.0	236.7
I-07/01/76	18:17	0.2	24.0	-9999.	4.52	0.0	0.0	221.3	0.0	221.3
D-07/01/76	18:17	-9.9	25.0	-9999.	15.90	0.0	0.0	440.3	0.0	440.3
I-07/01/76	19:08	0.1	24.0	-9999.	4.52	0.0	0.0	885.1	0.0	885.1
D-07/01/76	19:08	-9.9	24.5	-9999.	17.10	0.0	0.0	526.3	0.0	526.3

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	19:55	0.0	24.0	-9999.	7.55	0.0	0.0	265.0	0.0	265.0
D-07/01/76	19:55	-9.9	24.5	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-07/01/76	20:45	0.0	24.3	1100.	6.70	0.0	0.0	448.1	0.0	448.1
D-07/01/76	20:45	-9.9	24.5	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:33	0.1	24.0	-9999.	3.78	0.0	0.0	264.7	0.0	264.7
D-07/01/76	21:33	-9.9	24.5	-9999.	16.10	0.0	0.0	62.1	0.0	62.1
I-07/01/76	23:07	0.6	24.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:07	-9.9	24.5	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:52	0.8	24.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:52	-9.9	24.5	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:36	0.8	24.5	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:36	-9.9	24.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/02/76	01:19	0.9	24.1	990.	9.01	0.0	0.0	111.0	0.0	111.0
D-07/02/76	01:19	-9.9	24.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	16:31	0.6	26.1	210.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/06/76	16:31	-9.9	33.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:12	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:12	-9.9	34.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:54	0.9	25.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:54	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:35	1.0	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:35	-9.9	34.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:15	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:15	-9.9	34.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:57	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:57	-9.9	34.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	20:38	0.8	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:38	-9.9	35.0	-9999.	20.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	21:19	0.5	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	21:19	-9.9	34.5	-9999.	17.10	0.0	0.0	0.0	0.0	0.0

I=INTAKE, D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/08/76	00:40	0.1	23.4	1040.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:40	-9.9	30.5	-9999.	16.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	16:32	0.1	26.0	195.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	16:32	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:14	0.3	25.2	190.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17.14	-9.9	35.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:51	0.6	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:51	-9.9	35.0	-9999.	16.80	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:29	0.7	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:29	-9.9	35.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:08	0.8	26.0	-9999.	8.49	0.0	117.8	0.0	0.0	117.8
D-07/08/76	19:08	-9.9	35.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:47	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:47	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	20:23	1.0	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	20:23	-9.9	35.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:11	1.0	24.8	110.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	21:11	-9.9	34.0	-9999.	16.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	22:48	0.8	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	22:48	-9.9	34.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:25	0.5	25.5	-9999.	7.03	0.0	0.0	0.0	0.0	0.0
D-07/08/76	23:25	-9.9	32.0	-9999.	18.00	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:13	0.3	25.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:13	-9.9	30.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:50	0.2	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:50	-9.9	30.0	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/12/76	16:36	0.0	25.4	255.	5.27	0.0	0.0	0.0	0.0	0.0
D-07/12/76	16:36	-9.9	34.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:15	-0.2	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:15	-9.9	35.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/12/76	17:56	-0.2	26.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:56	-9.9	33.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	18:41	-0.3	26.0	-9999.	6.02	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:41	-9.9	34.5	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:23	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:23	-9.9	32.0	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:06	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:06	-9.9	31.0	-9999.	16.20	0.0	0.0	185.2	0.0	185.2
I-07/12/76	21:53	0.7	25.1	250.	8.72	0.0	0.0	229.4	0.0	229.4
D-07/12/76	21:53	-9.9	30.0	-9999.	18.80	0.0	0.0	53.2	0.0	53.2
I-07/12/76	22:36	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/12/76	22:36	-9.9	30.3	-9999.	18.00	0.0	0.0	111.1	0.0	111.1
I-07/12/76	23:19	0.9	26.0	-9999.	9.27	0.0	0.0	431.5	0.0	431.5
D-07/12/76	23:19	-9.9	30.0	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-07/13/76	00:03	1.0	26.0	-9999.	9.44	0.0	0.0	105.9	0.0	105.9
D-07/13/76	00:03	-9.9	29.0	-9999.	17.80	0.0	0.0	168.5	0.0	168.5
I-07/13/76	00:47	0.9	24.9	250.	9.44	0.0	0.0	105.9	0.0	105.9
D-07/13/76	00:47	-9.9	29.0	-9999.	17.30	0.0	0.0	115.6	0.0	115.6
I-07/13/76	16:38	0.0	24.3	250.	2.31	0.0	0.0	0.0	0.0	0.0
D-07/13/76	16:38	-9.9	32.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:18	-0.1	25.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:18	-9.9	32.0	-9999.	15.50	0.0	0.0	64.5	0.0	64.5
I-07/13/76	17:55	-0.2	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:55	-9.9	31.0	-9999.	15.70	0.0	0.0	63.7	0.0	63.7
I-07/13/76	18:37	-0.2	25.0	-9999.	5.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:37	-9.9	32.0	-9999.	14.70	0.0	0.0	68.0	0.0	68.0
I-07/13/76	19:18	-0.2	25.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:18	-9.9	30.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:57	0.2	25.0	-9999.	5.77	0.0	0.0	173.4	0.0	173.4
D-07/13/76	20:57	-9.9	30.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (ft)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/13/76	21:34	0.4	25.0	-9999.	7.55	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:34	-9.9	30.0	-9999.	16.40	61.0	0.0	61.0	0.0	61.0
I-07/13/76	22:12	0.6	23.0	233.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/13/76	22:12	-9.9	29.5	-9999.	17.70	0.0	0.0	56.5	0.0	56.5
I-07/13/76	22:52	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:52	-9.9	30.0	-9999.	16.10	0.0	0.0	62.1	0.0	62.1
I-07/13/76	23:31	0.9	25.0	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/13/76	23:31	-9.9	29.0	-9999.	18.90	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:09	1.0	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:09	-9.9	29.0	-9999.	18.30	0.0	0.0	109.3	0.0	109.3
I-07/14/76	00:47	1.1	25.0	240.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:47	-9.9	29.0	-9999.	17.10	0.0	0.0	0.0	0.0	0.0
I-07/14/76	16:28	0.3	24.2	240.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/14/76	16:28	-9.9	34.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:09	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:09	-9.9	34.0	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:54	0.0	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:54	-9.9	33.5	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:34	-0.1	25.0	-9999.	5.02	0.0	6.0	0.0	0.0	0.0
D-07/14/76	18:34	-9.9	33.5	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:13	-0.2	25.0	-9999.	3.89	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:13	-9.9	32.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:56	-0.2	25.0	-9999.	4.85	0.0	0.0	206.2	0.0	206.2
D-07/14/76	19:56	-9.9	32.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:31	0.2	24.4	220.	6.61	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:31	-9.9	31.0	-9999.	16.00	0.0	0.0	125.0	0.0	125.0
I-07/14/76	22:09	0.4	25.0	-9999.	5.94	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:09	-9.9	31.0	-9999.	17.00	0.0	0.0	58.8	0.0	58.8
I-07/14/76	22:51	0.5	25.0	-9999.	8.32	0.0	0.0	240.5	0.0	240.5
D-07/14/76	22:51	-9.9	31.0	-9999.	17.00	0.0	0.0	58.8	0.0	58.8

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	23:35	0.7	25.0	-9999.	8.84	0.0	0.0	339.5	0.0	339.5
D-07/14/76	23:35	-9.9	31.0	-9999.	17.40	0.0	0.0	114.9	0.0	114.9
I-07/15/76	00:14	0.8	25.0	-9999.	9.44	0.0	0.0	105.9	0.0	105.9
D-07/15/76	00:14	-9.9	30.0	-9999.	17.80	0.0	0.0	280.9	0.0	280.9
I-07/15/76	00:59	0.9	24.2	230.	9.18	0.0	0.0	0.0	108.9	108.9
D-07/15/76	00:59	-9.9	30.0	-9999.	17.70	0.0	0.0	169.5	0.0	169.5
I-07/15/76	16:36	0.5	25.1	230.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	16:36	-9.9	35.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:15	0.3	25.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:15	-9.9	35.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:01	0.1	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:01	-9.9	35.5	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:40	0.1	25.0	-9999.	5.10	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:40	-9.9	34.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:18	0.0	25.0	-9999.	4.44	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:18	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	-0.3	24.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	-9.9	33.0	-9999.	14.90	0.0	0.0	67.1	0.0	67.1
I-07/15/76	21:35	0.0	25.9	190.	2.68	0.0	0.0	0.0	347.3	347.3
D-07/15/76	21:35	-9.9	33.0	-9999.	15.60	0.0	0.0	0.0	64.1	64.1
I-07/15/76	22:13	0.2	26.0	-9999.	6.27	0.0	0.0	0.0	318.8	318.8
D-07/15/76	22:13	-9.9	33.3	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:51	0.4	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:51	-9.9	33.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:30	0.8	26.0	-9999.	6.78	0.0	0.0	0.0	442.5	442.5
D-07/15/76	23:30	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:12	0.8	26.0	-9999.	7.63	0.0	0.0	393.1	131.0	524.1
D-07/16/76	00:12	-9.9	32.5	-9999.	17.60	0.0	0.0	170.5	0.0	170.5
I-07/16/76	00:50	0.8	25.8	185.	8.49	0.0	0.0	353.4	117.8	471.2
D-07/16/76	00:50	-9.9	32.0	-9999.	17.30	0.0	0.0	57.8	57.8	115.6

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/26/76	16:55	-0.3	25.0	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	16:55	-9.9	34.0	-9999.	14.50	0.0	0.0	206.9	0.0	206.9
I-07/26/76	17:46	-0.2	24.5	-9999.	3.37	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:46	-9.9	34.0	-9999.	14.40	0.0	0.0	208.3	0.0	208.3
I-07/26/76	18:30	0.0	24.5	-9999.	6.02	0.0	0.0	166.1	0.0	166.1
D-07/26/76	18:30	-9.9	34.0	-9999.	14.30	0.0	0.0	209.8	0.0	209.8
I-07/26/76	19:16	0.3	24.5	-9999.	6.27	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:16	-9.9	34.0	-9999.	14.60	0.0	0.0	137.0	0.0	137.0
I-07/26/76	19:57	0.5	24.5	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:57	-9.9	34.0	-9999.	17.10	0.0	0.0	818.7	58.5	877.2
I-07/26/76	20:38	0.8	24.5	-9999.	9.18	0.0	0.0	217.8	0.0	217.8
D-07/26/76	20:38	-9.9	34.0	-9999.	18.60	0.0	0.0	698.9	1182.8	1881.7
I-07/26/76	21:20	0.9	25.0	-9999.	9.18	0.0	0.0	108.9	108.9	217.8
D-07/26/76	21:20	-9.9	33.0	-9999.	17.60	0.0	0.0	227.3	681.8	909.1
I-07/26/76	22:59	1.0	25.0	-9999.	10.41	0.0	0.0	96.1	192.2	288.3
D-07/26/76	22:59	-9.9	34.0	-9999.	19.50	0.0	0.0	307.7	615.4	923.1
I-07/26/76	23:43	0.9	24.5	-9999.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/26/76	23:43	-9.9	33.5	-9999.	17.50	0.0	0.0	342.9	685.7	1028.6
D-07/27/76	00:26	-9.9	34.0	-9999.	17.20	0.0	0.0	0.0	348.8	348.8
I-07/27/76	00:26	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
I-07/27/76	01:08	0.6	24.5	-9999.	8.66	0.0	0.0	346.3	0.0	346.3
D-07/27/76	01:08	-9.9	32.0	-9999.	16.70	0.0	0.0	898.2	718.6	1616.8
I-07/27/76	16:15	-0.2	24.2	6970.	4.60	0.0	0.0	0.0	0.0	0.0
D-07/27/76	16:15	-9.9	33.5	-9999.	15.40	0.0	0.0	714.3	0.0	714.3
I-07/27/76	16:56	-0.2	24.5	-9999.	1.51	0.0	0.0	0.0	662.4	662.4
D-07/27/76	16:56	-9.9	33.5	-9999.	14.80	0.0	0.0	1148.6	0.0	1148.6
I-07/27/76	17:33	-0.2	24.0	-9999.	0.63	0.0	0.0	4726.7	0.0	4726.7
D-07/27/76	17:33	-9.9	33.5	-9999.	13.40	0.0	0.0	3582.1	0.0	3582.1
I-07/27/76	18:18	-0.2	24.5	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:18	-9.9	33.5	-9999.	16.30	0.0	0.0	2024.5	0.0	2024.5

I=INTAKE; D=DISCHARGE

BAY (NEHUVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/27/76	19:00	-0.1	24.5	-9999.	4.77	0.0	0.0	629.2	0.0	629.2
D-07/27/76	19:00	-9.9	33.5	-9999.	16.10	0.0	0.0	1428.6	0.0	1428.6
I-07/27/76	19:42	0.2	24.5	-9999.	6.44	0.0	0.0	155.2	0.0	155.2
D-07/27/76	19:42	-9.9	33.5	-9999.	16.30	0.0	0.0	552.1	0.0	552.1
I-07/27/76	20:22	0.5	24.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/27/76	20:22	-9.9	34.0	-9999.	16.70	0.0	0.0	419.2	119.8	539.0
I-07/27/76	21:01	0.6	24.5	-9999.	6.78	0.0	0.0	590.0	147.5	737.5
D-07/27/76	21:01	-9.9	33.5	-9999.	17.10	0.0	0.0	292.4	175.4	467.8
I-07/27/76	22:36	0.9	24.5	-9999.	8.15	0.0	0.0	122.8	245.5	368.3
D-07/27/76	22:36	-9.9	33.5	-9999.	19.00	0.0	0.0	526.3	421.1	947.4
I-07/27/76	23:17	1.0	24.5	7190.	11.29	0.0	0.0	0.0	0.0	0.0
D-07/27/76	23:17	-9.9	33.5	-9999.	18.40	0.0	0.0	489.1	1250.0	1739.1
I-07/28/76	00:01	0.9	24.5	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:01	-9.9	33.5	-9999.	18.00	0.0	0.0	1722.2	1611.1	3333.3
I-07/28/76	00:43	0.8	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/28/76	00:43	-9.9	33.5	-9999.	17.80	0.0	0.0	730.3	786.5	1516.8
I-07/28/76	16:44	-0.1	24.5	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/28/76	16:44	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/28/76	17:25	-0.2	24.5	-9999.	4.02	0.0	0.0	745.5	248.5	994.0
D-07/28/76	17:25	-9.9	34.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:09	-0.3	25.0	-9999.	1.43	0.0	0.0	6994.5	0.0	6994.5
D-07/28/76	18:09	-9.9	34.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/28/76	18:56	-0.3	24.5	-9999.	2.47	0.0	0.0	808.3	0.0	808.3
D-07/28/76	18:56	-9.9	34.0	-9999.	14.80	0.0	0.0	1148.6	0.0	1148.6
I-07/28/76	19:38	-0.1	24.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/28/76	19:38	-9.9	34.0	-9999.	15.10	0.0	0.0	66.2	0.0	66.2
I-07/28/76	20:21	0.2	24.7	6880.	5.35	0.0	0.0	186.9	373.8	560.7
D-07/28/76	20:21	-9.9	34.0	-9999.	17.40	0.0	0.0	287.4	114.9	402.3
I-07/28/76	21:03	0.4	25.0	-9999.	6.78	0.0	0.0	295.0	147.5	442.5
D-07/28/76	21:03	-9.9	34.0	-9999.	16.60	0.0	0.0	722.9	361.4	1084.3

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/28/76	22:40	0.8	25.1	6890.	9.70	0.0	0.0	103.0	0.0	103.0
D-07/28/76	22:40	-9.9	34.0	-9999.	17.80	0.0	0.0	898.9	224.7	1123.6
I-07/28/76	23:24	1.0	25.0	-9999.	10.41	0.0	0.0	96.1	288.3	384.4
D-07/28/76	23:24	-9.9	34.0	-9999.	18.00	0.0	0.0	1944.4	333.3	2277.7
I-07/29/76	00:05	1.0	25.0	-9999.	9.88	0.0	0.0	0.0	101.2	101.2
D-07/29/76	00:05	-9.9	34.0	-9999.	18.30	0.0	0.0	1366.1	601.1	1967.2
I-07/29/76	00:44	0.9	24.9	6810.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/29/76	00:44	-9.9	34.0	-9999.	17.80	0.0	0.0	898.9	393.3	1292.2
I-07/29/76	16:34	0.3	25.0	-9999.	6.70	0.0	0.0	0.0	0.0	0.0
D-07/29/76	16:34	-9.9	34.0	-9999.	15.60	0.0	0.0	3846.2	0.0	3846.2
I-07/29/76	17:25	0.0	25.0	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-07/29/76	17:25	-9.9	35.0	-9999.	15.40	64.9	259.7	4350.6	0.0	4610.3
I-07/29/76	18:10	-0.2	25.0	-9999.	4.27	0.0	0.0	0.0	0.0	0.0
D-07/29/76	18:10	-9.9	34.0	-9999.	15.10	66.2	529.8	3907.3	0.0	4437.1
I-07/29/76	19:02	-0.2	25.0	-9999.	3.78	0.0	0.0	2117.7	0.0	2117.7
D-07/29/76	19:02	-9.9	33.0	-9999.	14.80	0.0	337.8	9594.6	67.6	10000.0
I-07/29/76	19:41	-0.2	24.5	-9999.	3.78	0.0	0.0	2647.2	0.0	2647.2
D-07/29/76	19:41	-9.9	34.0	-9999.	15.00	0.0	0.0	7666.7	0.0	7666.7
I-07/29/76	20:25	0.1	25.0	6020.	4.77	0.0	0.0	1887.7	0.0	1887.7
D-07/29/76	20:25	-9.9	33.0	-9999.	15.30	0.0	0.0	7320.3	1895.4	9215.7
I-07/29/76	22:22	0.7	24.5	-9999.	9.18	0.0	0.0	108.9	0.0	108.9
D-07/29/76	22:22	-9.9	33.5	-9999.	17.90	0.0	0.0	3128.5	1005.6	4134.1
I-07/29/76	23:00	0.8	25.0	-9999.	10.23	0.0	0.0	684.3	488.8	1173.1
D-07/29/76	23:00	-9.9	33.5	-9999.	16.90	0.0	0.0	236.7	118.3	355.0
I-07/29/76	23:41	0.9	24.5	-9999.	9.18	0.0	0.0	653.4	653.4	1306.8
D-07/29/76	23:41	-9.9	33.0	-9999.	18.70	0.0	0.0	2994.7	481.3	3476.0
I-07/30/76	00:30	1.0	24.5	6010.	11.29	0.0	0.0	797.3	0.0	797.3
D-07/30/76	00:30	-9.9	31.0	-9999.	18.00	111.1	0.0	4666.7	2166.7	6833.4

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/19/76	23:15	-0.3	15.0	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/19/76	23:15	-9.9	21.5	-9999.	12.00	0.0	0.0	83.3	0.0	83.3
I-05/20/76	01:11	0.0	14.5	140.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/20/76	01:11	-9.9	19.0	-9999.	11.40	0.0	87.7	87.7	0.0	175.4
I-05/24/76	17:55	0.5	15.8	130.	17.78	0.0	0.0	0.0	0.0	0.0
D-05/24/76	17:55	-9.9	23.5	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-05/24/76	19:40	0.8	16.4	130.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/24/76	19:40	-9.9	24.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-05/24/76	22:04	0.7	16.5	130.	18.33	0.0	0.0	0.0	0.0	0.0
D-05/24/76	22:04	-9.9	23.5	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-05/24/76	23:57	0.4	16.5	-9999.	18.25	0.0	0.0	0.0	0.0	0.0
D-05/24/76	23:57	-9.9	21.0	-9999.	12.40	0.0	0.0	0.0	0.0	0.0
I-05/25/76	01:13	0.2	16.5	130.	20.05	0.0	0.0	0.0	0.0	0.0
D-05/25/76	01:13	-9.9	20.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-05/25/76	17:15	0.3	17.0	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	17:15	-9.9	24.5	-9999.	12.70	0.0	0.0	78.7	0.0	78.7
I-05/25/76	18:35	0.7	16.5	122.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	18:35	-9.9	22.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-05/25/76	21:00	1.1	16.5	120	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	21:00	-9.9	21.0	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-05/25/76	22:25	1.0	16.5	120.	18.73	0.0	0.0	0.0	0.0	0.0
D-05/25/76	22:25	-9.9	20.0	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-05/25/76	23:48	0.6	16.0	120.	19.30	0.0	0.0	0.0	0.0	0.0
D-05/25/76	23:48	-9.9	19.5	-9999.	13.30	0.0	0.0	0.0	0.0	0.0
I-05/26/76	17:50	0.2	16.5	160.	20.67	0.0	0.0	0.0	0.0	0.0
D-05/26/76	17:50	-9.9	24.0	-9999.	12.80	0.0	0.0	0.0	0.0	0.0
I-05/26/76	19:17	0.7	16.5	-9999.	18.49	0.0	0.0	0.0	0.0	0.0
D-05/26/76	19:17	-9.9	26.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-05/26/76	20:46	0.8	16.3	-9999.	19.96	0.0	0.0	0.0	0.0	0.0
D-05/26/76	20:46	-9.9	26.0	-9999.	11.60	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/04/76	01:03	0.6	17.4	170.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/04/76	01:03	-9.9	21.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/07/76	17:52	0.7	18.7	160.	7.37	0.0	0.0	271.2	0.0	271.2
D-06/07/76	17:52	-9.9	27.5	-9999.	13.70	0.0	0.0	0.0	0.0	0.0
I-06/07/76	18:39	0.8	19.0	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/07/76	18:39	-9.9	26.5	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
I-06/07/76	19:22	0.8	18.5	-9999.	5.73	0.0	0.0	0.0	0.0	0.0
D-06/07/76	19:22	-9.9	25.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:09	0.7	18.8	160.	1.43	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:09	-9.9	25.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:59	0.6	18.8	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:59	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	22:46	0.4	18.1	160.	8.51	0.0	0.0	0.0	0.0	0.0
D-06/07/76	22:46	-9.9	23.5	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	23:30	0.0	18.5	-9999.	8.22	0.0	0.0	0.0	0.0	0.0
D-06/07/76	23:30	-9.9	22.5	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
I-06/08/76	00:15	0.0	18.0	-9999.	4.02	0.0	0.0	0.0	0.0	0.0
D-06/08/76	00:15	-9.9	22.0	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-06/08/76	01:07	-0.1	18.0	-9999.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/08/76	01:07	-9.9	21.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/08/76	16:41	0.2	19.0	145.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/08/76	16:41	-9.9	24.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	17:25	0.5	19.0	-9999.	12.68	0.0	0.0	0.0	0.0	0.0
D-06/08/76	17:25	-9.9	25.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-06/08/76	18:21	0.7	18.5	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-06/08/76	18:21	-9.9	26.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-06/08/76	19:07	0.8	18.5	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-06/08/76	19:07	-9.9	28.0	-9999.	16.90	0.0	0.0	0.0	0.0	0.0
I-06/08/76	19:59	0.9	18.5	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/08/76	19:59	-9.9	28.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0

I=INTAKE, D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/08/76	20:48	1.1	18.9	160.	14.06	0.0	0.0	0.0	0.0	0.0
D-06/08/76	20:48	-9.9	28.0	-9999.	14.40	0.0	0.0	69.4	0.0	69.4
I-06/08/76	22:26	0.6	19.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	22:26	-9.9	28.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-06/08/76	23:15	0.3	18.8	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	23:15	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:04	0.2	18.6	150.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:04	-9.9	23.5	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:48	0.0	18.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:48	-9.9	22.5	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	17:15	0.0	19.2	160.	8.07	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:15	-9.9	26.5	-9999.	13.28	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:10	0.5	19.0	-9999.	10.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:10	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:59	0.8	19.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:59	-9.9	29.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	19:49	0.9	19.3	160.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	19:49	-9.9	27.9	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-06/09/76	20:39	1.0	19.2	140.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:39	-9.9	28.0	-9999.	14.13	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:27	1.0	19.0	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:27	-9.9	27.2	-9999.	17.43	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:04	0.8	19.0	160.	11.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:04	-9.9	28.0	-9999.	14.42	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:49	0.7	19.0	-9999.	8.81	0.0	0.0	113.5	0.0	113.5
D-06/09/76	23:49	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	00:43	0.3	18.8	160.	7.51	0.0	0.0	0.0	0.0	0.0
D-06/10/76	00:43	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	17:08	-0.3	19.2	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:08	-9.9	29.0	-9999.	12.36	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	17:55	0.1	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:55	-9.9	29.0	-9999.	13.56	0.0	0.0	73.7	0.0	73.7
I-06/10/76	18:41	0.5	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:41	-9.9	29.5	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	19:20	0.8	19.5	-9999.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	19:20	-9.9	29.0	-9999.	12.73	0.0	0.0	78.6	0.0	78.6
I-06/10/76	20:06	0.8	19.7	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:06	-9.9	29.0	-9999.	12.73	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:54	1.0	19.8	165.	18.73	0.0	0.0	53.4	0.0	53.4
D-06/10/76	20:54	-9.9	29.5	-9999.	12.73	0.0	78.6	0.0	0.0	78.6
I-06/10/76	22:30	0.9	19.8	-9999.	19.05	0.0	0.0	0.0	0.0	0.0
D-06/10/76	22:30	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	23:12	0.9	20.0	-9999.	23.22	0.0	0.0	43.1	0.0	43.1
D-06/10/76	23:12	-9.9	28.5	-9999.	13.85	0.0	0.0	72.2	0.0	72.2
I-06/10/76	24:00	0.9	19.8	-9999.	19.22	0.0	0.0	0.0	0.0	0.0
D-06/10/76	24:00	-9.9	26.5	-9999.	13.85	0.0	0.0	144.5	0.0	144.5
I-06/11/76	00:50	0.4	19.6	160.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:50	-9.9	25.0	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-06/14/76	17:00	0.0	19.4	210.	11.76	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:00	-9.9	29.0	-9999.	11.40	0.0	0.0	87.7	0.0	87.7
I-06/14/76	17:55	-0.2	19.5	-9999.	5.28	0.0	0.0	0.0	0.0	0.0
D-06/14/76	17:55	-9.9	29.0	-9999.	10.40	0.0	0.0	0.0	0.0	0.0
I-06/14/76	18:40	-0.3	19.0	-9999.	6.34	0.0	0.0	157.8	0.0	157.8
D-06/14/76	18:40	-9.9	29.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/14/76	19:29	-0.4	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/14/76	19:29	-9.9	29.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/14/76	20:17	-0.4	19.5	-9999.	8.51	0.0	0.0	0.0	0.0	0.0
D-06/14/76	20:17	-9.9	29.0	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-06/14/76	21:09	0.0	19.5	210.	6.29	0.0	158.9	0.0	0.0	158.9
D-06/14/76	21:09	-9.9	29.0	-9999.	9.40	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/14/76	22:43	0.5	19.5	-9999.	9.12	0.0	219.3	0.0	0.0	219.3
D-06/14/76	22:43	-9.9	27.0	-9999.	11.40	0.0	0.0	263.2	0.0	263.2
I-06/14/76	23:30	0.7	19.5	-9999.	8.97	0.0	223.0	0.0	0.0	223.0
D-06/14/76	23:30	-9.9	26.0	-9999.	11.10	0.0	0.0	0.0	0.0	0.0
I-06/15/76	00:14	0.8	19.5	-9999.	11.88	0.0	84.2	168.4	0.0	252.6
D-06/15/76	00:14	-9.9	26.0	-9999.	11.70	0.0	0.0	256.4	0.0	256.4
I-06/15/76	01:01	0.9	19.5	190.	11.64	0.0	0.0	0.0	0.0	0.0
D-06/15/76	01:01	-9.9	25.5	-9999.	13.10	0.0	0.0	76.3	0.0	76.3
I-06/15/76	16:58	0.1	19.9	200.	6.67	0.0	0.0	0.0	0.0	0.0
D-06/15/76	16:58	-9.9	30.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/15/76	17:52	0.0	20.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/15/76	17:52	-9.9	30.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-06/15/76	18:37	-0.1	20.0	-9999.	12.94	0.0	0.0	0.0	0.0	0.0
D-06/15/76	18:37	-9.9	30.0	-9999.	15.10	0.0	0.0	66.2	0.0	66.2
I-06/15/76	19:26	-0.3	20.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/15/76	19:26	-9.9	30.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-06/15/76	20:16	-0.4	20.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/15/76	20:16	-9.9	30.0	-9999.	15.50	0.0	0.0	64.5	0.0	64.5
I-06/15/76	21:38	-0.2	20.0	-9999.	12.81	0.0	0.0	0.0	0.0	0.0
D-06/15/76	21:38	-9.9	30.0	-9999.	15.50	0.0	0.0	64.5	0.0	64.5
I-06/15/76	22:27	-0.1	20.0	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/15/76	22:27	-9.9	30.0	-9999.	13.60	0.0	0.0	0.0	0.0	0.0
I-06/15/76	23:13	0.4	20.2	190.	15.03	0.0	0.0	0.0	0.0	0.0
D-06/15/76	23:13	-9.9	30.0	-9999.	17.20	0.0	0.0	290.7	0.0	290.7
I-06/16/76	00:02	0.6	20.0	-9999.	15.53	0.0	0.0	0.0	0.0	0.0
D-06/16/76	00:02	-9.9	29.0	-9999.	17.90	0.0	0.0	0.0	0.0	0.0
I-06/16/76	00:47	0.7	20.0	180.	13.46	0.0	222.9	297.1	0.0	520.0
D-06/16/76	00:47	-9.9	28.0	-9999.	15.30	0.0	0.0	392.2	0.0	392.2
I-06/16/76	16:24	0.6	20.5	190.	9.76	0.0	0.0	102.5	0.0	102.5
D-06/16/76	16:24	-9.9	31.0	-9999.	16.90	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (ft)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/16/76	17:11	0.4	21.0	-9999.	8.22	0.0	0.0	0.0	0.0	0.0
D-06/16/76	17:11	-9.9	30.5	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-06/16/76	18:03	0.1	21.0	-9999.	7.79	0.0	0.0	1797.2	0.0	1797.2
D-06/16/76	18:03	-9.9	31.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/16/76	19:02	0.0	21.0	-9999.	4.15	0.0	0.0	1446.5	0.0	1446.5
D-06/16/76	19:02	-9.9	28.0	-9999.	14.20	0.0	0.0	140.8	0.0	140.8
I-06/16/76	19:50	-0.1	20.0	-9999.	10.14	0.0	0.0	98.6	0.0	98.6
D-06/16/76	19:50	-9.9	28.0	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-06/16/76	20:42	-0.3	20.1	190.	7.15	0.0	0.0	0.0	0.0	0.0
D-06/16/76	20:42	-9.9	24.5	-9999.	17.30	0.0	0.0	231.2	0.0	231.2
I-06/16/76	21:29	-0.2	20.0	-9999.	4.92	0.0	0.0	203.3	0.0	203.3
D-06/16/76	21:29	-9.9	24.0	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-06/16/76	23:05	0.0	20.0	-9999.	7.84	0.0	0.0	127.6	0.0	127.6
D-06/16/76	23:05	-9.9	21.5	-9999.	14.40	0.0	0.0	1319.5	0.0	1319.5
I-06/16/76	23:53	0.4	20.0	-9999.	10.25	0.0	0.0	292.8	0.0	292.8
D-06/16/76	23:53	-9.9	21.0	-9999.	15.00	0.0	0.0	800.0	0.0	800.0
I-06/17/76	16:33	0.6	20.8	180.	17.47	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:33	-9.9	22.0	-9999.	19.40	0.0	0.0	51.5	0.0	51.5
I-06/17/76	17:19	0.5	21.0	-9999.	15.10	0.0	0.0	132.5	0.0	132.5
D-06/17/76	17:19	-9.9	22.0	-9999.	15.60	0.0	0.0	320.6	0.0	320.6
I-06/17/76	18:05	0.2	21.0	-9999.	15.10	0.0	0.0	529.8	0.0	529.8
D-06/17/76	18:05	-9.9	22.5	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:49	0.1	21.0	-9999.	9.18	0.0	0.0	217.8	0.0	217.8
D-06/17/76	18:49	-9.9	22.5	-9999.	13.30	0.0	0.0	225.6	0.0	225.6
I-06/17/76	19:35	0.0	21.0	-9999.	8.49	0.0	0.0	588.9	0.0	588.9
D-06/17/76	19:35	-9.9	22.0	-9999.	13.50	0.0	0.0	222.2	0.0	222.2
I-06/17/76	20:23	-0.2	20.5	-9999.	8.49	0.0	0.0	353.4	0.0	353.4
D-06/17/76	20:23	-9.9	21.5	-9999.	13.50	0.0	0.0	148.1	0.0	148.1
I-06/17/76	21:08	-0.2	20.6	175.	7.97	0.0	0.0	125.4	0.0	125.4
D-06/17/76	21:08	-9.9	21.0	-9999.	14.10	0.0	0.0	283.7	0.0	283.7

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	22:38	-0.3	20.5	-9999.	8.49	0.0	0.0	117.8	0.0	117.8
D-06/17/76	22:38	-9.9	21.0	-9999.	14.40	0.0	0.0	138.8	0.0	138.8
I-06/17/76	23:23	-0.1	21.0	-9999.	9.18	0.0	0.0	435.6	0.0	435.6
D-06/17/76	23:23	-9.9	21.0	-9999.	14.00	0.0	0.0	142.8	0.0	142.8
I-06/18/76	00:10	0.1	20.5	-9999.	8.84	0.0	0.0	226.4	0.0	226.4
D-06/18/76	00:10	-9.9	21.0	-9999.	13.90	0.0	0.0	1151.0	0.0	1151.0
I-06/18/76	00:55	0.4	21.0	170.	9.18	0.0	0.0	108.9	0.0	108.9
D-06/18/76	00:55	-9.9	21.0	-9999.	15.90	0.0	0.0	628.9	0.0	628.9
I-06/21/76	16:40	0.5	24.0	140.	7.29	0.0	0.0	0.0	0.0	0.0
D-06/21/76	16:40	-9.9	33.0	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/21/76	17:27	0.7	24.5	151.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	17:27	-9.9	32.5	-9999.	11.30	0.0	0.0	88.5	0.0	88.5
I-06/21/76	18:15	0.8	23.0	150.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/21/76	18:15	-9.9	32.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:03	0.8	26.0	150.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:03	-9.9	32.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/21/76	19:48	0.8	25.0	150.	6.44	0.0	0.0	0.0	0.0	0.0
D-06/21/76	19:48	-9.9	32.5	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/21/76	20:30	0.6	25.5	150.	4.77	0.0	0.0	209.7	0.0	209.7
D-06/21/76	20:30	-9.9	32.5	-9999.	12.60	0.0	0.0	0.0	0.0	0.0
I-06/21/76	21:17	0.5	25.0	160.	4.77	0.0	0.0	209.7	0.0	209.7
D-06/21/76	21:17	-9.9	32.0	-9999.	11.30	0.0	0.0	88.5	0.0	88.5
I-06/21/76	23:11	0.3	22.8	170.	2.80	0.0	0.0	0.0	0.0	0.0
D-06/21/76	23:11	-9.9	28.0	-9999.	11.90	0.0	0.0	168.1	0.0	168.1
I-06/21/76	23:56	0.2	25.0	250.	4.77	0.0	0.0	419.5	0.0	419.5
D-06/21/76	23:56	-9.9	26.0	-9999.	10.40	0.0	0.0	192.3	0.0	192.3
I-06/22/76	00:41	0.0	22.5	350.	4.77	0.0	0.0	209.7	0.0	209.7
D-06/22/76	00:41	-9.9	28.0	-9999.	13.90	0.0	0.0	143.9	0.0	143.9
I-06/22/76	16:37	0.4	23.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-06/22/76	16:37	-9.9	33.0	-9999.	10.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/22/76	17:25	0.5	22.8	240.	5.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	17:25	-9.9	33.0	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
I-06/22/76	18:10	0.7	23.0	-9999.	5.18	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:10	-9.9	33.0	-9999.	11.60	0.0	0.0	0.0	0.0	0.0
I-06/22/76	18:57	0.7	23.0	-9999.	6.10	0.0	0.0	0.0	0.0	0.0
D-06/22/76	18:57	-9.9	33.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/22/76	19:44	0.7	23.0	-9999.	6.41	0.0	0.0	0.0	0.0	0.0
D-06/22/76	19:44	-9.9	33.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-06/23/76	20:36	0.7	23.0	-9999.	5.77	0.0	0.0	693.5	0.0	693.5
D-06/22/76	20:36	-9.9	33.0	-9999.	13.10	0.0	0.0	76.3	0.0	76.3
I-06/22/76	21:23	0.6	22.5	260.	6.44	0.0	155.2	310.5	0.0	465.7
D-06/22/76	21:23	-9.9	33.0	-9999.	11.20	0.0	0.0	89.3	0.0	89.3
I-06/22/76	22:59	0.3	22.5	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/22/76	22:59	-9.9	33.0	-9999.	11.80	0.0	0.0	169.5	0.0	169.5
I-06/22/76	23:46	0.2	22.5	-9999.	1.67	0.0	0.0	1197.9	0.0	1197.9
D-06/22/76	23:46	-9.9	32.0	-9999.	10.40	0.0	0.0	96.2	0.0	96.2
I-06/23/76	00:37	0.1	22.5	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/23/76	00:37	-9.9	32.0	-9999.	9.90	0.0	0.0	101.0	0.0	101.0
I-06/23/76	01:19	-0.1	22.4	260.	1.35	0.0	0.0	740.8	0.0	740.8
D-06/23/76	01:19	-9.9	31.0	-9999.	12.30	0.0	0.0	162.6	0.0	162.6
I-06/23/76	16:12	0.1	23.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:12	-9.9	33.0	-9999.	11.00	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:59	0.2	22.4	450.	4.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:59	-9.9	33.0	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	17:45	0.5	22.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:45	-9.9	33.5	-9999.	10.80	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:28	0.6	23.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:28	-9.9	33.5	-9999.	10.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:15	0.8	22.0	400.	6.70	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:15	-9.9	33.5	-9999.	11.70	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	20:01	0.8	23.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:01	-9.9	33.5	-9999.	13.50	0.0	0.0	74.1	0.0	74.1
I-06/23/76	20:45	0.8	23.0	-9999.	13.62	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:45	-9.9	33.5	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
I-06/23/76	21:28	0.8	22.0	-9999.	6.78	0.0	0.0	442.5	0.0	442.5
D-06/23/76	21:28	-9.9	33.0	-9999.	11.70	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:02	-9.9	23.0	420.	4.77	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:02	-9.9	33.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:48	0.4	22.5	460.	5.27	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:48	-9.9	33.0	-9999.	10.80	0.0	92.6	92.6	0.0	185.2
I-06/24/76	00:31	0.1	22.5	600.	4.77	0.0	0.0	419.5	0.0	419.5
D-06/24/76	00:31	-9.9	33.0	-9999.	11.20	0.0	0.0	0.0	0.0	0.0
I-06/24/76	01:09	0.0	23.0	750.	2.80	0.0	0.0	357.3	0.0	357.3
D-06/24/76	01:09	-9.9	33.0	-9999.	11.40	0.0	0.0	175.4	0.0	175.4
I-06/24/76	16:20	-0.3	23.5	770.	0.32	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:20	-9.9	34.0	-9999.	11.70	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:07	0.0	23.6	815.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:07	-9.9	34.0	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:52	0.2	23.5	-9999.	5.85	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:52	-9.9	34.0	-9999.	13.00	0.0	0.0	76.9	0.0	76.9
I-06/24/76	18:38	0.5	23.0	-9999.	6.61	0.0	0.0	453.8	0.0	453.8
D-06/24/76	18:38	-9.9	33.8	-9999.	14.00	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:30	0.7	23.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:30	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	20:18	0.8	23.0	-9999.	6.86	0.0	0.0	0.0	0.0	0.0
D-06/24/76	20:18	-9.9	34.0	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:04	0.8	23.1	790.	8.49	0.0	0.0	117.8	0.0	117.8
D-06/24/76	21:04	-9.9	34.0	-9999.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/24/76	21:55	0.8	23.5	-9999.	7.72	0.0	0.0	777.5	0.0	777.5
D-06/24/76	21:55	-9.9	33.5	-9999.	13.50	0.0	0.0	74.1	0.0	74.1

I=INTAKE, D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	23:30	0.5	23.0	-9999.	6.19	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:30	-9.9	33.5	-9999.	13.30	0.0	0.0	375.9	0.0	375.9
I-06/25/76	00:17	0.3	23.0	-9999.	5.60	0.0	0.0	178.5	0.0	178.5
D-06/25/76	00:17	-9.9	32.5	-9999.	13.60	0.0	0.0	73.5	0.0	73.5
I-06/25/76	01:00	0.2	23.0	960.	5.02	0.0	0.0	0.0	0.0	0.0
D-06/25/76	01:00	-9.9	33.0	-9999.	12.10	0.0	0.0	82.6	0.0	82.6
I-06/28/76	16:30	-0.1	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-06/28/76	16:30	-9.9	34.0	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
I-06/28/76	17:24	-0.2	24.0	2210.	1.59	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:24	-9.9	34.0	-9999.	12.70	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:13	-0.4	24.0	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:13	-9.9	34.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:02	-0.1	24.0	-9999.	2.64	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:02	-9.9	34.0	-9999.	12.70	0.0	0.0	78.7	0.0	78.7
I-06/28/76	19:55	0.2	24.5	-9999.	4.60	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:55	-9.9	35.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:46	0.4	24.5	-9999.	6.61	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:46	-9.9	34.0	-9999.	11.40	0.0	0.0	87.7	0.0	87.7
I-06/28/76	22:52	0.9	24.1	2170.	9.36	0.0	0.0	0.0	0.0	0.0
D-06/28/76	22:52	-9.9	34.5	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-06/29/76	23:42	1.0	24.5	-9999.	10.01	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:42	-9.9	34.5	-9999.	12.70	0.0	0.0	78.7	0.0	78.7
I-06/29/76	00:30	0.9	24.0	-9999.	7.97	0.0	0.0	125.4	0.0	125.4
D-06/29/76	00:30	-9.9	34.5	-9999.	13.40	0.0	0.0	74.6	0.0	74.6
I-06/29/76	01:11	0.8	24.0	2080.	7.72	0.0	0.0	129.6	0.0	129.6
D-06/29/76	01:11	-9.9	33.5	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/29/76	19:55	-0.1	24.0	1940.	10.08	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:55	-9.9	34.0	-9999.	12.40	0.0	0.0	80.6	0.0	80.6
I-06/29/76	20:40	0.2	24.0	-9999.	10.99	0.0	0.0	91.0	0.0	91.0
D-06/29/76	20:40	-9.9	34.0	-9999.	12.40	0.0	0.0	241.9	0.0	241.9

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	21:27	0.5	24.0	1800.	6.78	0.0	0.0	442.5	0.0	442.5
D-06/29/76	21:27	-9.9	34.0	-9999.	11.40	0.0	0.0	263.2	0.0	263.2
I-06/29/76	22:15	0.7	24.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:15	-9.9	34.0	-9999.	13.30	0.0	0.0	225.6	0.0	225.6
I-06/29/76	22:58	0.9	24.0	-9999.	7.80	0.0	0.0	256.3	0.0	256.3
D-06/29/76	22:58	-9.9	34.0	-9999.	13.80	0.0	0.0	217.4	0.0	217.4
I-06/29/76	23:41	1.0	24.0	-9999.	10.05	0.0	0.0	298.4	0.0	298.4
D-06/29/76	23:41	-9.9	33.0	2050.	13.80	0.0	0.0	0.0	0.0	0.0
I-06/30/76	00:28	1.0	24.0	-9999.	12.90	0.0	0.0	155.1	0.0	155.1
D-06/30/76	00:28	-9.9	33.0	-9999.	16.50	0.0	0.0	60.6	0.0	60.6
I-06/30/76	01:10	1.0	23.8	1940.	9.18	0.0	0.0	108.9	0.0	108.9
D-06/30/76	01:10	-9.9	32.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-06/30/76	17:13	0.2	23.8	1670.	4.93	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:13	-9.9	34.0	-9999.	11.40	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:17	0.2	24.0	-9999.	3.70	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:17	-9.9	34.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:07	0.5	23.9	1500.	5.55	0.0	0.0	541.0	0.0	541.0
D-06/30/76	22:07	-9.9	34.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:54	0.8	24.0	-9999.	7.46	0.0	0.0	134.0	0.0	134.0
D-06/30/76	22:54	-9.9	34.0	-9999.	12.20	0.0	0.0	327.9	0.0	327.9
I-06/30/76	23:40	0.9	23.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-06/30/76	23:40	-9.9	34.0	-9999.	12.60	0.0	0.0	79.4	0.0	79.4
I-07/01/76	00:40	1.1	23.6	1570.	8.49	0.0	0.0	117.8	0.0	117.8
D-07/01/76	00:40	-9.9	34.0	-9999.	13.10	0.0	0.0	0.0	0.0	0.0
I-07/01/76	17:32	0.3	24.1	1360.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/01/76	17:32	-9.9	25.0	-9999.	16.90	0.0	0.0	177.5	0.0	177.5
I-07/01/76	18:17	0.2	24.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/01/76	18:17	-9.9	25.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/01/76	19:08	0.1	24.0	-9999.	4.52	0.0	0.0	221.3	0.0	221.3
D-07/01/76	19:08	-9.9	24.5	-9999.	17.10	0.0	0.0	117.0	0.0	117.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	19:55	0.0	24.0	-9999.	7.55	0.0	0.0	132.5	0.0	132.5
D-07/01/76	19:55	-9.9	24.5	-9999.	16.00	0.0	0.0	62.5	0.0	62.5
I-07/01/76	20:45	0.0	24.3	1100.	6.70	0.0	0.0	298.7	0.0	298.7
D-07/01/76	20:45	-9.9	24.5	-9999.	16.20	0.0	0.0	185.2	0.0	185.2
I-07/01/76	21:33	0.1	24.0	-9999.	3.78	0.0	0.0	264.7	0.0	264.7
D-07/01/76	21:33	-9.9	24.5	-9999.	16.10	0.0	0.0	186.3	0.0	186.3
I-07/01/76	23:07	0.6	24.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/01/76	23:07	-9.9	24.5	-9999.	16.60	0.0	0.0	542.2	0.0	542.2
I-07/01/76	23:52	0.8	24.0	-9999.	7.29	0.0	0.0	411.5	0.0	411.5
D-07/01/76	23:52	-9.9	24.5	-9999.	17.30	0.0	0.0	578.0	0.0	578.0
I-07/02/76	00:36	0.8	24.5	-9999.	7.80	0.0	0.0	256.3	0.0	256.3
D-07/02/76	00:36	-9.9	24.0	-9999.	17.60	0.0	0.0	397.7	0.0	397.7
I-07/02/76	01:19	0.9	24.1	990.	9.01	0.0	0.0	111.0	0.0	111.0
D-07/02/76	01:19	-9.9	24.5	-9999.	18.60	0.0	0.0	483.9	0.0	483.9
I-07/06/76	16:31	0.6	26.1	210.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/06/76	16:31	-9.9	33.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:12	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:12	-9.9	34.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/06/76	17:54	0.9	25.5	-9999.	8.75	0.0	0.0	0.0	0.0	0.0
D-07/06/76	17:54	-9.9	33.5	-9999.	19.00	0.0	0.0	0.0	0.0	0.0
I-07/06/76	18:35	1.0	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	18:35	-9.9	34.0	-9999.	18.40	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:15	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:15	-9.9	34.5	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/06/76	19:57	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/06/76	19:57	-9.9	34.5	-9999.	17.60	0.0	0.0	56.8	0.0	56.8
I-07/06/76	20:38	0.8	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	20:38	-9.9	35.0	-9999.	20.00	0.0	0.0	50.0	0.0	50.0
I-07/06/76	21:19	0.5	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/06/76	21:19	-9.9	34.5	-9999.	17.10	0.0	0.0	58.5	0.0	58.5

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/06/76	22:48	0.2	25.5	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/06/76	22:48	-9.9	34.5	-9999.	16.20	0.0	0.0	61.7	0.0	61.7
I-07/06/76	23:31	0.2	25.4	210.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/06/76	23:31	-9.9	33.0	-9999.	18.40	0.0	0.0	54.3	0.0	54.3
I-07/07/76	00:12	-0.1	25.5	-9999.	7.46	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:12	-9.9	32.0	-9999.	18.00	0.0	0.0	55.6	0.0	55.6
I-07/07/76	00:51	0.0	25.5	210.	3.04	0.0	0.0	0.0	0.0	0.0
D-07/07/76	00:51	-9.9	30.0	-9999.	15.30	0.0	0.0	0.0	65.4	65.4
I-07/07/76	16:52	0.5	25.8	180.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/07/76	16:52	-9.9	34.5	-9999.	17.30	0.0	0.0	0.0	0.0	0.0
I-07/07/76	17:32	0.6	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	17:32	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	18:13	0.9	26.0	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:13	-9.9	34.5	-9999.	18.40	0.0	0.0	54.3	0.0	54.3
I-07/07/76	18:52	1.0	26.0	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/07/76	18:52	-9.9	34.5	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/07/76	19:31	1.0	26.0	-9999.	14.89	0.0	0.0	0.0	0.0	0.0
D-07/07/76	19:31	-9.9	34.5	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:10	1.0	25.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/07/76	20:10	-9.9	34.5	-9999.	18.10	0.0	0.0	0.0	0.0	0.0
I-07/07/76	20:49	0.9	26.0	-9999.	10.05	0.0	0.0	0.0	0.0	0.0
D-07/07/76	20:49	-9.9	34.5	-9999.	18.50	0.0	0.0	0.0	0.0	0.0
I-07/07/76	21:29	0.8	24.8	270.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/07/76	21:29	-9.9	34.5	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-07/07/76	22:45	0.5	25.0	-9999.	5.77	0.0	0.0	173.4	0.0	173.4
D-07/07/76	22:45	-9.9	34.5	-9999.	17.70	0.0	0.0	113.0	0.0	113.0
I-07/07/76	23:24	0.4	25.5	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/07/76	23:24	-9.9	33.0	-9999.	17.00	0.0	0.0	58.8	0.0	58.8
I-07/08/76	00:04	0.2	25.0	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/08/76	00:04	-9.9	32.0	-9999.	15.80	0.0	0.0	63.3	0.0	63.3

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/08/76	00:40	0.1	23.4	1040.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/08/76	00:40	-9.9	30.5	-9999.	16.50	0.0	0.0	121.2	0.0	121.2
I-07/08/76	16:32	0.1	26.0	195.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	16:32	-9.9	35.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:14	0.3	25.2	190.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:14	-9.9	35.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/08/76	17:51	0.6	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/08/76	17:51	-9.9	35.0	-9999.	16.80	0.0	0.0	0.0	0.0	0.0
I-07/08/76	18:29	0.7	26.0	-9999.	7.80	0.0	0.0	0.0	0.0	0.0
D-07/08/76	18:29	-9.9	35.0	-9999.	17.00	0.0	0.0	0.0	0.0	0.0
I-07/08/76	19:08	0.8	26.0	-9999.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:08	-9.9	35.0	-9999.	17.30	0.0	0.0	57.8	0.0	57.8
I-07/08/76	19:47	0.9	26.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/08/76	19:47	-9.9	35.0	-9999.	17.50	0.0	0.0	57.1	0.0	57.1
I-07/08/76	20:23	1.0	25.5	-9999.	9.18	0.0	0.0	0.0	108.9	108.9
D-07/08/76	20:23	-9.9	35.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-07/08/76	21:11	1.0	24.8	110.	8.49	0.0	0.0	235.6	235.6	471.2
D-07/08/76	21:11	-9.9	34.0	-9999.	16.30	0.0	0.0	61.3	0.0	61.3
I-07/08/76	22:48	0.8	25.5	-9999.	9.18	0.0	0.0	217.8	0.0	217.8
D-07/08/76	22:48	-9.9	34.0	-9999.	19.30	0.0	0.0	0.0	0.0	0.0
I-07/08/76	23:25	0.5	25.5	-9999.	7.03	0.0	0.0	142.2	0.0	142.2
D-07/08/76	23:25	-9.9	32.0	-9999.	18.00	0.0	0.0	166.7	0.0	166.7
I-07/09/76	00:13	0.3	25.5	-9999.	6.44	0.0	0.0	0.0	0.0	0.0
D-07/09/76	00:13	-9.9	30.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/09/76	00:50	0.2	25.5	-9999.	6.78	0.0	0.0	147.5	0.0	147.5
D-07/09/76	00:50	-9.9	30.0	-9999.	19.00	0.0	0.0	210.5	0.0	210.5
I-07/12/76	16:36	0.0	25.4	255.	5.27	0.0	0.0	0.0	0.0	0.0
D-07/12/76	16:36	-9.9	34.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/12/76	17:15	-0.2	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:15	-9.9	35.0	-9999.	16.70	0.0	0.0	59.9	0.0	59.9

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/12/76	17:56	-0.2	26.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/12/76	17:56	-9.9	35.0	-9999.	14.60	0.0	0.0	68.5	0.0	68.5
I-07/12/76	18:41	-0.3	26.0	-9999.	6.02	0.0	0.0	0.0	0.0	0.0
D-07/12/76	18:41	-9.9	34.5	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/12/76	19:23	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	19:23	-9.9	32.0	-9999.	19.10	0.0	0.0	0.0	0.0	0.0
I-07/12/76	20:06	-0.5	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/12/76	20:06	-9.9	31.0	-9999.	16.20	0.0	0.0	0.0	0.0	0.0
I-07/12/76	21:53	0.7	25.1	250.	8.72	0.0	0.0	114.7	114.7	229.4
D-07/12/76	21:53	-9.9	30.0	-9999.	18.80	0.0	0.0	106.4	531.9	638.3
I-07/12/76	22:36	0.8	26.0	-9999.	9.18	0.0	0.0	0.0	217.8	217.8
D-07/12/76	22:36	-9.9	30.3	-9999.	18.00	0.0	0.0	55.6	166.7	222.3
I-07/12/76	23:19	0.9	26.0	-9999.	9.27	0.0	0.0	0.0	0.0	0.0
D-07/12/76	23:19	-9.9	30.0	-9999.	17.30	0.0	0.0	115.6	115.6	231.2
I-07/13/76	00:03	1.0	26.0	-9999.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:03	-9.9	29.0	-9999.	17.80	0.0	0.0	112.4	56.2	168.6
I-07/13/76	00:47	0.9	24.9	250.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/13/76	00:47	-9.9	29.0	-9999.	17.30	0.0	0.0	57.8	173.4	231.2
I-07/13/76	16:38	0.0	24.3	250.	2.31	0.0	0.0	0.0	0.0	0.0
D-07/13/76	16:38	-9.9	32.0	-9999.	15.90	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:18	-0.1	25.0	-9999.	4.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:18	-9.9	32.0	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/13/76	17:55	-0.2	24.0	-9999.	4.11	0.0	0.0	0.0	0.0	0.0
D-07/13/76	17:55	-9.9	31.0	-9999.	15.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	18:37	-0.2	25.0	-9999.	5.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	18:37	-9.9	32.0	-9999.	14.70	0.0	0.0	0.0	0.0	0.0
I-07/13/76	19:18	-0.2	25.0	-9999.	4.52	0.0	0.0	0.0	0.0	0.0
D-07/13/76	19:18	-9.9	30.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/13/76	20:57	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/13/76	20:57	-9.9	30.0	-9999.	15.80	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/13/76	21:34	0.4	25.0	-9999.	7.55	0.0	0.0	0.0	0.0	0.0
D-07/13/76	21:34	-9.9	30.0	-9999.	16.40	0.0	0.0	0.0	61.0	61.0
I-07/13/76	22:12	0.6	23.0	233.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/13/76	22:12	-9.9	29.5	-9999.	17.70	0.0	0.0	0.0	113.0	113.0
I-07/13/76	22:52	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	108.9	108.9
D-07/13/76	22:52	-9.9	30.0	-9999.	16.10	0.0	0.0	0.0	248.4	248.4
I-07/13/76	23:31	0.9	25.0	-9999.	8.15	0.0	0.0	0.0	368.3	368.3
D-07/13/76	23:31	-9.9	29.0	-9999.	18.90	0.0	0.0	0.0	52.9	52.9
I-07/14/76	00:09	1.0	25.0	-9999.	10.23	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:09	-9.9	29.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	00:47	1.1	25.0	240.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/14/76	00:47	-9.9	29.0	-9999.	17.10	0.0	0.0	0.0	117.0	117.0
I-07/14/76	16:28	0.3	24.2	240.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/14/76	16:28	-9.9	34.0	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:09	0.2	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:09	-9.9	34.0	-9999.	16.20	0.0	0.0	0.0	61.7	61.7
I-07/14/76	17:54	0.0	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:54	-9.9	33.5	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:34	-0.1	25.0	-9999.	5.02	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:34	-9.9	33.5	-9999.	15.00	0.0	0.0	66.7	0.0	66.7
I-07/14/76	19:13	-0.2	25.0	-9999.	3.89	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:13	-9.9	32.5	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:56	-0.2	25.0	-9999.	4.85	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:56	-9.9	32.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:31	0.2	24.4	220.	6.61	0.0	0.0	0.0	151.3	151.3
D-07/14/76	21:31	-9.9	31.0	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:09	0.4	25.0	-9999.	5.94	0.0	0.0	0.0	168.5	168.5
D-07/14/76	22:09	-9.9	31.0	-9999.	17.00	0.0	0.0	0.0	58.8	58.8
I-07/14/76	22:51	0.5	25.0	-9999.	8.32	0.0	0.0	0.0	120.2	120.2
D-07/14/76	22:51	-9.9	31.0	-9999.	17.00	0.0	0.0	58.8	0.0	58.8

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	23:35	0.7	25.0	-9999.	8.84	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:35	-9.9	31.0	-9999.	17.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:14	0.8	25.0	-9999.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:14	-9.9	30.0	-9999.	17.80	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:59	0.9	24.2	230.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:59	-9.9	30.0	-9999.	17.70	0.0	0.0	0.0	0.0	0.0
I-07/15/76	16:36	0.5	25.1	230.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	16:36	-9.9	35.0	-9999.	16.60	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:15	0.3	25.0	-9999.	7.29	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:15	-9.9	35.0	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:01	0.1	25.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:01	-9.9	35.5	-9999.	16.00	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:40	0.1	25.0	-9999.	5.10	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:40	-9.9	34.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:18	0.0	25.0	-9999.	4.44	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:18	-9.9	33.0	-9999.	15.30	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:58	-0.8	26.0	-9999.	3.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:58	-9.9	33.0	-9999.	14.90	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:35	0.0	25.9	190.	2.88	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:35	-9.9	33.0	-9999.	15.60	0.0	0.0	0.0	128.2	128.2
I-07/15/76	22:13	0.2	26.0	-9999.	6.27	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:13	-9.9	33.5	-9999.	15.50	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:51	0.4	26.0	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:51	-9.9	33.0	-9999.	16.40	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:30	0.8	26.0	-9999.	6.78	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:30	-9.9	33.5	-9999.	16.10	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:12	0.8	26.0	-9999.	7.63	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:12	-9.9	32.5	-9999.	17.60	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:50	0.8	25.8	185.	8.49	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:50	-9.9	32.0	-9999.	17.30	0.0	0.0	0.0	57.8	57.8

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/26/76	16:55	-0.3	25.0	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-07/26/76	16:55	-9.9	34.0	-9999.	14.50	0.0	0.0	0.0	0.0	0.0
I-07/26/76	17:46	-0.2	24.5	-9999.	3.37	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:46	-9.9	34.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:30	0.0	24.5	-9999.	6.02	0.0	0.0	0.0	0.0	0.0
D-07/26/76	18:30	-9.9	34.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:16	0.3	24.5	-9999.	6.27	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:16	-9.9	34.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-07/26/76	19:57	0.5	24.5	-9999.	8.15	0.0	0.0	0.0	0.0	0.0
D-07/26/76	19:57	-9.9	34.0	-9999.	17.10	0.0	0.0	0.0	0.0	0.0
I-07/26/76	20:38	0.8	24.5	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/26/76	20:38	-9.9	34.0	-9999.	18.60	0.0	0.0	0.0	0.0	0.0
I-07/26/76	21:20	0.9	25.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
D-07/26/76	21:20	-9.9	33.0	-9999.	17.60	0.0	0.0	0.0	56.8	56.8
I-07/26/76	22:59	1.0	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-07/26/76	22:59	-9.9	34.0	-9999.	19.50	0.0	0.0	0.0	0.0	0.0
I-07/26/76	23:43	0.9	24.5	-9999.	9.44	0.0	0.0	0.0	0.0	0.0
D-07/26/76	23:43	-9.9	33.5	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
D-07/27/76	00:24	-9.9	34.0	-9999.	17.20	0.0	0.0	0.0	0.0	0.0
I-07/27/76	00:24	0.8	25.0	-9999.	9.18	0.0	0.0	0.0	0.0	0.0
I-07/27/76	01:08	0.6	24.5	-9999.	8.66	0.0	0.0	0.0	0.0	0.0
D-07/27/76	01:08	-9.9	32.0	-9999.	16.70	0.0	0.0	0.0	0.0	0.0
I-07/27/76	16:15	-0.2	24.2	6970.	4.60	0.0	0.0	0.0	0.0	0.0
D-07/27/76	16:15	-9.9	33.5	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-07/27/76	16:54	-0.2	24.5	-9999.	1.51	0.0	0.0	0.0	0.0	0.0
D-07/27/76	16:56	-9.9	33.5	-9999.	14.80	0.0	0.0	0.0	0.0	0.0
I-07/27/76	17:35	-0.2	24.0	-9999.	0.63	0.0	0.0	0.0	0.0	0.0
D-07/27/76	17:35	-9.9	33.5	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-07/27/76	18:18	-0.2	24.5	-9999.	5.77	0.0	0.0	0.0	0.0	0.0
D-07/27/76	18:18	-9.9	33.5	-9999.	16.30	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-03/15/76	18:41	0.4	4.1	1460.	15.10	0.0	596.1	198.7	0.0	794.8
D-03/15/76	19:04	-9.9	13.0	-9999.	6.80	0.0	441.4	0.0	0.0	441.4
I-03/15/76	21:00	0.8	4.0	-9999.	16.85	0.0	1839.3	593.3	0.0	2432.6
D-03/15/76	20:36	-9.9	13.2	1830.	7.69	0.0	2340.8	260.1	0.0	2600.9
I-03/15/76	22:04	0.9	4.0	1415.	10.99	0.0	728.2	91.0	0.0	819.2
D-03/15/76	21:59	-9.9	13.0	-9999.	6.80	0.0	1471.4	0.0	0.0	1471.4
I-03/15/76	23:30	0.7	4.5	-9999.	16.85	0.0	3322.7	1008.6	0.0	4331.3
D-03/15/76	23:26	-9.9	12.9	1650.	7.69	0.0	520.2	390.1	0.0	910.3
I-03/16/76	00:55	0.2	3.9	1435.	16.85	0.0	771.3	237.3	0.0	1008.6
D-03/16/76	00:51	-9.9	9.5	-9999.	7.39	0.0	1489.0	0.0	0.0	1489.0
I-03/16/76	17:10	0.0	3.7	1330.	11.70	0.0	1111.5	0.0	0.0	1111.5
D-03/16/76	17:18	-9.9	13.5	-9999.	6.80	0.0	1030.0	0.0	0.0	1030.0
I-03/16/76	19:39	0.8	4.0	-9999.	15.10	0.0	1059.6	264.9	0.0	1324.5
D-03/16/76	19:50	-9.9	13.5	-9999.	7.69	0.0	780.3	260.1	0.0	1040.4
I-03/16/76	20:55	1.2	4.0	-9999.	15.10	0.0	841.0	264.9	0.0	1125.9
D-03/16/76	20:57	-9.9	12.8	-9999.	7.09	0.0	564.3	0.0	0.0	564.3
I-03/16/76	22:39	1.4	3.0	1100.	13.20	0.0	681.8	0.0	0.0	681.8
D-03/16/76	22:17	-9.9	13.0	-9999.	7.09	0.0	423.2	141.1	0.0	564.3
I-03/17/76	01:13	0.8	4.0	-9999.	13.20	0.0	1363.6	833.4	0.0	2197.0
D-03/17/76	01:31	-9.9	9.0	-9999.	7.39	0.0	1218.3	541.5	0.0	1759.8
I-03/17/76	17:33	-0.6	4.0	-9999.	14.27	0.0	1331.9	70.1	0.0	1402.0
D-03/17/76	17:54	-9.9	10.7	-9999.	7.69	0.0	1560.5	130.0	0.0	1690.5
I-03/17/76	19:29	-0.6	2.9	1060.	13.20	0.0	757.5	75.8	0.0	833.3
D-03/17/76	19:47	-9.9	12.0	-9999.	7.39	0.0	1218.3	0.0	0.0	1218.3
I-03/17/76	21:07	0.0	3.5	1060.	15.96	0.0	626.6	62.7	0.0	689.3
D-03/17/76	21:32	-9.9	9.0	-9999.	6.51	0.0	1075.9	153.7	0.0	1229.6
I-03/17/76	22:57	0.3	3.0	-9999.	15.10	0.0	596.1	0.0	0.0	596.1
D-03/17/76	23:10	-9.9	12.0	-9999.	7.09	0.0	564.3	0.0	0.0	564.3
I-03/18/76	00:20	0.3	3.0	-9999.	13.20	0.0	606.0	0.0	0.0	606.0
D-03/18/76	00:25	-9.9	11.7	910.	7.69	0.0	520.2	0.0	0.0	520.2

I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-03/18/76	18:12	-0.6	3.0	-9999.	13.20	0.0	1363.6	75.8	0.0	1439.4
D-03/18/76	18:04	-9.9	13.0	-9999.	7.39	0.0	1218.2	270.7	0.0	1488.9
I-03/18/76	19:34	-0.6	3.5	540.	13.20	0.0	530.3	75.8	0.0	606.1
D-03/18/76	19:35	-9.9	12.5	-9999.	7.69	0.0	520.1	130.0	0.0	650.1
I-03/18/76	20:35	-0.2	3.0	-9999.	12.43	0.0	563.0	80.4	0.0	643.4
D-03/18/76	20:39	-9.9	12.3	-9999.	7.39	0.0	406.1	0.0	0.0	406.1
I-03/18/76	21:38	0.2	3.9	380.	12.43	0.0	160.8	0.0	0.0	160.8
D-03/18/76	21:38	-9.9	12.5	-9999.	7.39	0.0	541.5	0.0	0.0	541.5
I-03/18/76	22:43	0.5	4.0	-9999.	15.96	0.0	375.9	62.7	0.0	438.6
D-03/18/76	22:43	-9.9	13.1	550.	7.69	0.0	520.1	0.0	0.0	520.1
I-03/18/76	23:52	0.7	3.5	-9999.	13.20	0.0	757.6	227.3	0.0	984.9
D-03/18/76	23:49	-9.9	12.5	-9999.	7.69	0.0	1300.5	0.0	0.0	1300.5
I-03/19/76	00:58	0.7	3.9	410.	14.27	0.0	70.1	0.0	0.0	70.1
D-03/19/76	01:03	-9.9	11.5	-9999.	7.69	0.0	650.2	0.0	0.0	650.2
I-03/30/76	17:51	0.2	7.2	130.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/30/76	18:00	-9.9	16.5	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	19:14	0.5	8.0	-9999.	15.10	0.0	66.2	0.0	0.0	66.2
D-03/30/76	19:15	-9.9	16.4	165.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	20:33	0.9	7.5	-9999.	13.20	0.0	151.5	0.0	0.0	151.5
D-03/30/76	20:28	-9.9	16.0	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	21:33	1.1	7.1	130.	11.70	0.0	85.5	0.0	0.0	85.5
D-03/30/76	21:28	-9.9	16.0	-9999.	11.30	0.0	0.0	0.0	0.0	0.0
I-03/30/76	22:35	1.2	7.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-03/30/76	22:37	-9.9	16.3	165.	8.90	0.0	0.0	0.0	0.0	0.0
I-03/30/76	23:45	0.9	7.5	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-03/30/76	23:55	-9.9	15.8	-9999.	7.90	0.0	0.0	0.0	0.0	0.0
I-03/31/76	01:00	0.7	7.5	-9999.	15.10	0.0	0.0	0.0	0.0	0.0
D-03/31/76	01:00	-9.9	13.7	-9999.	8.90	0.0	0.0	0.0	0.0	0.0
I-05/18/76	00:30	0.8	16.5	128.	20.61	0.0	0.0	0.0	0.0	0.0
D-05/18/76	00:30	-9.9	21.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/04/76	01:03	0.6	17.4	170.	19.38	0.0	0.0	0.0	0.0	0.0
D-06/04/76	01:03	-9.9	21.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/07/76	17:52	0.7	18.7	160.	7.37	0.0	0.0	0.0	0.0	0.0
D-06/07/76	17:52	-9.9	27.5	-9999.	13.70	0.0	0.0	0.0	0.0	0.0
I-06/07/76	18:39	0.8	19.0	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/07/76	18:39	-9.9	26.5	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
I-06/07/76	19:22	0.8	18.5	-9999.	5.73	0.0	0.0	0.0	0.0	0.0
D-06/07/76	19:22	-9.9	25.5	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:09	0.7	18.8	160.	1.43	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:09	-9.9	25.0	-9999.	12.50	0.0	0.0	0.0	0.0	0.0
I-06/07/76	20:59	0.6	18.8	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/07/76	20:59	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	22:46	0.4	18.1	160.	8.51	0.0	0.0	0.0	0.0	0.0
D-06/07/76	22:46	-9.9	23.5	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/07/76	23:30	0.0	18.5	-9999.	8.22	0.0	0.0	0.0	0.0	0.0
D-06/07/76	23:30	-9.9	22.5	-9999.	12.90	0.0	0.0	0.0	0.0	0.0
I-06/08/76	00:15	0.0	18.0	-9999.	4.02	0.0	0.0	0.0	0.0	0.0
D-06/08/76	00:15	-9.9	22.0	-9999.	12.20	0.0	0.0	0.0	0.0	0.0
I-06/08/76	01:07	-0.1	18.0	-9999.	10.30	0.0	0.0	0.0	0.0	0.0
D-06/08/76	01:07	-9.9	21.5	-9999.	13.50	0.0	0.0	0.0	0.0	0.0
I-06/08/76	16:41	0.2	19.0	145.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/08/76	16:41	-9.9	24.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	17:25	0.5	19.0	-9999.	12.88	0.0	0.0	0.0	0.0	0.0
D-06/08/76	17:25	-9.9	25.0	-9999.	14.60	0.0	0.0	0.0	0.0	0.0
I-06/08/76	18:21	0.7	18.5	-9999.	15.96	0.0	0.0	0.0	62.7	62.7
D-06/08/76	18:21	-9.9	26.0	-9999.	15.60	0.0	0.0	0.0	0.0	0.0
I-06/08/76	19:07	0.8	18.5	-9999.	15.96	0.0	0.0	0.0	0.0	0.0
D-06/08/76	19:07	-9.9	28.0	-9999.	16.90	0.0	0.0	0.0	0.0	0.0
I-06/08/76	19:59	0.9	18.5	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/08/76	19:59	-9.9	28.0	-9999.	15.20	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/08/76	20:48	1.1	18.9	160.	14.06	0.0	0.0	0.0	0.0	0.0
D-06/08/76	20:48	-9.9	28.0	-9999.	14.40	0.0	0.0	0.0	0.0	0.0
I-06/08/76	22:26	0.6	19.0	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/08/76	22:26	-9.9	28.0	-9999.	14.30	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:15	0.3	18.8	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:15	-9.9	25.0	-9999.	13.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:04	0.2	18.6	150.	13.73	0.0	0.0	0.0	72.9	72.9
D-06/09/76	00:04	-9.9	23.5	-9999.	13.90	0.0	0.0	0.0	0.0	0.0
I-06/09/76	00:48	0.0	18.0	-9999.	13.73	0.0	0.0	0.0	0.0	0.0
D-06/09/76	00:48	-9.9	22.5	-9999.	15.40	0.0	0.0	0.0	0.0	0.0
I-06/09/76	17:15	0.0	19.2	160.	8.07	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:15	-9.9	26.5	-9999.	13.28	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:10	0.5	19.0	-9999.	10.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:10	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:59	0.8	19.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:59	-9.9	29.5	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/09/76	19:49	0.5	19.3	160.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	19:49	-9.9	27.9	-9999.	15.00	0.0	0.0	0.0	0.0	0.0
I-06/09/76	20:39	1.0	19.2	140.	15.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:39	-9.9	28.0	-9999.	14.13	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:27	1.0	19.0	-9999.	13.20	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:27	-9.9	27.2	-9999.	17.43	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:04	0.8	19.0	160.	11.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:04	-9.9	28.0	-9999.	14.42	0.0	0.0	0.0	0.0	0.0
I-06/09/76	23:49	0.7	19.0	-9999.	8.81	0.0	0.0	0.0	0.0	0.0
D-06/09/76	23:49	-9.9	29.0	-9999.	13.85	0.0	0.0	0.0	0.0	0.0
I-06/10/76	00:43	0.3	18.8	160.	7.51	0.0	0.0	0.0	0.0	0.0
D-06/10/76	00:43	-9.9	23.5	-9999.	13.85	0.0	0.0	0.0	72.2	72.2
I-06/10/76	17:03	-0.3	19.2	165.	18.73	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:03	-9.9	29.0	-9999.	12.36	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

2.3 LOVETT GENERATING STATION ENTRAINMENT SURVIVAL EXPRESSED AS ABUNDANCE (DENSITY) RAW DATA SUMMARIES, 1976

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/27/76	00:35	-0.2	16.0	130.	12.00	0.0	0.0	0.0	0.0	0.0
D-05/27/76	00:35	-9.9	20.5	130.	12.00	0.0	0.0	0.0	0.0	0.0
I-06/01/76	21:34	-0.6	15.5	130.	11.80	0.0	0.0	0.0	0.0	0.0
D-06/01/76	21:34	-9.9	16.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/01/76	23:10	-0.2	15.0	130.	11.70	0.0	0.0	0.0	0.0	0.0
D-06/01/76	23:10	-9.9	15.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/02/76	00:35	0.2	15.0	130.	11.50	0.0	0.0	0.0	0.0	0.0
D-06/02/76	00:35	-9.9	15.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/02/76	19:09	-0.5	17.0	139.	11.60	0.0	0.0	0.0	0.0	0.0
D-06/02/76	19:09	-9.9	17.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/02/76	20:20	-0.6	17.0	139.	10.50	0.0	0.0	0.0	0.0	0.0
D-06/02/76	20:20	-9.9	17.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/02/76	21:15	-0.7	16.5	139.	11.60	0.0	0.0	258.6	0.0	258.6
D-06/02/76	21:15	-9.9	17.0	-9999.	13.51	0.0	0.0	148.0	0.0	148.0
I-06/02/76	22:55	-0.3	15.5	137.	12.10	0.0	0.0	165.3	0.0	165.3
D-06/02/76	22:55	-9.9	14.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/02/76	23:48	-9.9	15.5	140.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/02/76	23:48	-9.9	16.5	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/03/76	18:37	-0.5	17.0	-9999.	10.10	0.0	0.0	0.0	0.0	0.0
D-06/03/76	18:37	-9.9	17.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/03/76	19:39	-0.6	18.0	-9999.	11.60	0.0	0.0	0.0	0.0	0.0
D-06/03/76	19:39	-9.9	17.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/03/76	20:16	-0.7	17.5	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/03/76	20:16	-9.9	17.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/03/76	20:59	-0.8	17.5	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/03/76	20:59	-9.9	17.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/03/76	22:12	-0.8	17.0	-9999.	11.80	0.0	0.0	0.0	0.0	0.0
D-06/03/76	22:12	-9.9	17.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-06/03/76	22:55	-0.7	16.5	-9999.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/03/76	22:55	-9.9	17.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/03/76	23:39	-0.5	16.0	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/03/76	23:39	-9.9	17.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6
I-06/04/76	00:23	-0.3	16.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
D-06/04/76	00:23	-9.9	17.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-06/09/76	13:40	-0.9	22.0	135.	12.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	13:40	-9.9	28.0	-9999.	11.96	0.0	0.0	0.0	0.0	0.0
I-06/09/76	14:38	-1.2	21.0	130.	11.80	0.0	0.0	0.0	0.0	0.0
D-06/09/76	14:38	-9.9	28.0	-9999.	11.53	0.0	0.0	0.0	0.0	0.0
I-06/09/76	15:25	-0.9	19.5	130.	12.50	0.0	0.0	0.0	0.0	0.0
D-06/09/76	15:25	-9.9	28.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/09/76	16:20	-1.0	18.0	130.	12.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	16:20	-9.9	27.5	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/09/76	17:16	-0.6	17.0	125.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:16	-9.9	26.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:53	0.0	17.0	120.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:53	-9.9	23.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/09/76	19:35	0.3	17.0	120.	12.39	0.0	0.0	81.3	0.0	81.3
D-06/09/76	19:35	-9.9	20.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/09/76	20:19	-0.3	17.0	120.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:19	-9.9	20.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:03	0.5	17.5	120.	11.69	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:03	-9.9	20.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	17:10	-1.0	19.0	132.	13.50	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:10	-9.9	27.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:00	-0.6	18.0	13000.	12.40	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:00	-9.9	26.0	-9999.	14.53	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:50	-0.3	17.2	130.	12.20	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:50	-9.9	25.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:25	0.1	18.2	130.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:25	-9.9	22.5	-9999.	19.09	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	21:09	0.3	18.0	130.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/10/76	21:09	-9.9	23.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	21:55	0.3	18.0	132.	13.40	0.0	0.0	0.0	0.0	0.0
D-06/10/76	21:55	-9.9	23.5	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
I-06/10/76	23:19	0.1	18.0	131.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/10/76	23:19	-9.9	20.5	-9999.	15.07	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:03	0.0	18.0	132.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:03	-9.9	21.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:45	-0.2	18.7	133.	12.60	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:45	-9.9	21.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/16/76	17:12	-0.3	21.0	150.	10.41	0.0	0.0	96.0	0.0	96.0
D-06/16/76	17:12	-9.9	28.5	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/16/76	18:02	-0.4	21.0	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:02	-9.9	28.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-06/16/76	18:53	-0.6	21.0	145.	10.76	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:53	-9.9	29.0	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/16/76	19:39	-0.8	22.0	150.	10.07	0.0	0.0	397.2	0.0	397.2
D-06/16/76	19:39	-9.9	30.5	-9999.	12.48	0.0	0.0	480.9	0.0	480.9
I-06/16/76	20:24	-0.8	21.5	160.	8.63	0.0	0.0	579.4	0.0	579.4
D-06/16/76	20:24	-9.9	30.5	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/16/76	21:11	-0.8	21.5	145.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/16/76	21:11	-9.9	30.5	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/16/76	22:36	-0.7	20.5	140.	9.39	0.0	0.0	106.5	0.0	106.5
D-06/16/76	22:36	-9.9	29.0	-9999.	12.48	0.0	0.0	320.6	0.0	320.6
I-06/16/76	23:40	-0.4	20.0	130.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/16/76	23:40	-9.9	34.0	-9999.	15.33	0.0	0.0	65.2	0.0	65.2
I-06/17/76	00:21	-0.2	19.5	130.	11.71	0.0	0.0	0.0	0.0	0.0
D-06/17/76	00:21	-9.9	24.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	16:48	-0.2	20.5	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:48	-9.9	28.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	17:29	-0.3	21.0	160.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	17:29	-9.9	28.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:09	-0.4	21.0	170.	11.45	0.0	0.0	174.8	0.0	174.8
D-06/17/76	18:09	-9.9	28.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:49	-0.3	19.0	170.	9.73	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:49	-9.9	28.0	-9999.	13.86	0.0	0.0	72.2	0.0	72.2
I-06/17/76	19:27	-0.7	21.5	150.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/17/76	19:27	-9.9	27.0	-9999.	12.22	0.0	0.0	245.5	0.0	245.5
I-06/17/76	20:09	-0.8	21.5	180.	9.05	0.0	0.0	0.0	0.0	0.0
D-06/17/76	20:09	-9.9	27.0	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/17/76	20:50	-0.9	27.0	-9999.	9.73	0.0	0.0	102.8	0.0	102.8
D-06/17/76	20:53	-9.9	27.0	-9999.	12.74	0.0	0.0	0.0	0.0	0.0
I-06/17/76	21:59	-1.0	22.0	190.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/17/76	21:59	-9.9	27.5	-9999.	12.99	0.0	0.0	153.9	0.0	153.9
I-06/17/76	22:40	-0.9	21.0	185.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	22:40	-9.9	25.5	-9999.	13.69	0.0	0.0	73.1	0.0	73.1
I-06/17/76	23:22	-0.8	19.0	145.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:22	-9.9	28.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	23:59	-0.6	20.0	140.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:59	-9.9	26.0	-9999.	14.81	0.0	0.0	202.5	0.0	202.5
I-06/18/76	00:40	0.4	20.0	130.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/18/76	00:40	-9.9	25.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:35	-0.6	22.0	-9999.	14.25	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:35	-9.9	31.5	-9999.	16.64	0.0	0.0	60.1	0.0	60.1
I-06/23/76	17:28	-0.4	22.1	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:28	-9.9	31.0	-9999.	16.64	0.0	0.0	60.1	0.0	60.1
I-06/23/76	18:14	-0.2	21.8	150.	8.88	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:14	-9.9	31.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/23/76	19:00	-0.1	22.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:00	-9.9	31.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	-0.1	22.0	-9999.	14.03	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:42	-9.9	31.0	-9999.	13.17	75.9	0.0	75.9	0.0	75.9
I-06/23/76	20:26	0.1	22.5	-9999.	11.81	0.0	0.0	454.0	0.0	454.0
D-06/23/76	20:25	-9.9	31.5	-9999.	15.33	0.0	0.0	391.3	0.0	391.3
I-06/23/76	21:10	0.2	22.7	220.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/23/76	21:10	-9.9	31.0	-9999.	15.33	0.0	0.0	130.4	0.0	130.4
I-06/23/76	22:27	0.0	23.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/23/76	22:27	-9.9	29.5	-9999.	14.03	0.0	0.0	213.8	0.0	213.8
I-06/23/76	23:08	-0.3	22.5	-9999.	9.81	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:08	-9.9	27.5	-9999.	13.17	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:55	-0.4	23.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/23/76	23:55	-9.9	28.5	-9999.	15.07	0.0	0.0	132.7	0.0	132.7
I-06/24/76	00:35	-0.5	23.1	260.	13.54	0.0	0.0	0.0	0.0	0.0
D-06/24/76	00:35	-9.9	30.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/24/76	16:28	-0.9	24.5	162.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:28	-9.9	32.5	-9999.	13.77	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:10	-0.7	22.5	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:10	-9.9	32.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:53	-0.5	22.5	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:53	-9.9	31.0	-9999.	12.02	0.0	0.0	234.0	0.0	234.0
I-06/24/76	18:36	-0.3	22.5	-9999.	15.33	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:36	-9.9	31.0	-9999.	16.29	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:16	-0.1	22.5	-9999.	10.24	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:16	-9.9	29.0	-9999.	14.73	0.0	0.0	67.9	0.0	67.9
I-06/24/76	20:04	0.0	22.5	410.	11.97	0.0	0.0	167.2	0.0	167.2
D-06/24/76	20:04	-9.9	29.5	-9999.	15.59	0.0	0.0	448.9	0.0	448.9
I-06/24/76	20:45	0.1	22.5	-9999.	11.27	0.0	0.0	532.2	0.0	532.2
D-06/24/76	20:45	-9.9	29.0	-9999.	15.25	0.0	0.0	262.4	0.0	262.4
I-06/24/76	22:11	0.1	23.5	-9999.	12.14	0.0	0.0	82.4	0.0	82.4
D-06/24/76	22:11	-9.9	30.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	22:53	-0.1	23.0	-9999.	13.19	0.0	0.0	0.0	0.0	0.0
D-06/24/76	22:53	-9.9	29.0	-9999.	15.25	0.0	0.0	131.2	0.0	131.2
I-06/24/76	23:35	-0.1	23.0	-9999.	12.49	0.0	0.0	400.3	0.0	400.3
D-06/24/76	23:35	-9.9	29.0	-9999.	14.55	0.0	0.0	343.6	0.0	343.6
I-06/25/76	00:18	-0.3	23.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:18	-9.9	29.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/25/76	00:59	-0.4	24.0	660.	10.93	0.0	0.0	91.5	0.0	91.5
D-06/25/76	00:59	-9.9	29.0	-9999.	14.38	0.0	0.0	208.6	0.0	208.6
I-06/28/76	17:34	-0.9	27.0	1000.	11.97	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:34	-9.9	33.0	950.	15.77	0.0	0.0	0.0	0.0	0.0
I-06/28/76	18:33	-0.9	25.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:33	-9.9	34.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:27	-0.8	24.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:23	-9.9	34.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:02	-0.6	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:02	-9.9	32.5	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:51	-0.2	23.5	1000.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:51	-9.9	33.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	21:33	0.0	24.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/28/76	21:33	-9.9	32.5	-9999.	15.59	0.0	0.0	128.3	0.0	128.3
I-06/28/76	23:25	0.3	24.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:25	-9.9	30.0	-9999.	15.36	0.0	0.0	0.0	0.0	0.0
I-06/29/76	00:08	9.2	24.0	-9999.	13.54	0.0	0.0	0.0	0.0	0.0
D-06/29/76	00:08	-9.9	31.0	-9999.	12.65	0.0	0.0	0.0	0.0	0.0
I-06/29/76	00:43	-0.2	24.0	1050.	12.14	0.0	0.0	0.0	0.0	0.0
D-06/29/76	00:43	-9.9	33.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/29/76	18:23	-0.9	24.9	670.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	18:23	-9.9	33.0	-9999.	11.61	0.0	0.0	172.2	0.0	172.2
I-06/29/76	19:15	-0.9	25.0	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:15	-9.9	31.0	-9999.	11.87	0.0	0.0	168.4	0.0	168.4

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	20:00	-1.0	25.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:00	-9.9	32.0	-9999.	12.13	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:47	-0.6	24.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:47	-9.9	31.0	-9999.	13.69	0.0	0.0	0.0	0.0	0.0
I-06/29/76	21:29	-0.3	23.7	390.	12.31	0.0	0.0	0.0	0.0	0.0
D-06/29/76	21:29	-9.9	31.5	-9999.	14.29	0.0	0.0	70.0	0.0	70.0
I-06/29/76	22:11	0.0	24.0	-9999.	12.75	0.0	0.0	78.4	0.0	78.4
D-06/29/76	22:11	-9.9	30.0	-9999.	15.07	0.0	0.0	66.3	0.0	66.3
I-06/29/76	22:54	0.2	24.0	-9999.	11.10	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:54	-9.9	30.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-06/29/76	23:35	0.3	24.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/29/76	23:35	-9.9	29.5	-9999.	15.59	0.0	0.0	128.3	0.0	128.3
I-06/30/76	00:22	0.3	23.5	760.	14.25	0.0	0.0	0.0	0.0	0.0
D-06/30/76	00:22	-9.9	29.5	-9999.	15.94	0.0	0.0	188.2	0.0	188.2
I-06/30/76	16:40	-0.3	23.0	1200.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/30/76	16:40	-9.9	33.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/30/76	17:44	-0.6	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:44	-9.9	28.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/30/76	18:33	-0.7	25.0	-9999.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/30/76	18:33	-9.9	33.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-06/30/76	20:18	-0.7	25.0	-9999.	7.54	0.0	0.0	132.6	0.0	132.6
D-06/30/76	20:18	-9.9	32.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/30/76	21:03	-0.4	25.0	-9999.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:03	-9.9	32.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/30/76	22:02	-0.2	24.0	-9999.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:02	-9.9	32.0	-9999.	10.76	0.0	0.0	93.0	0.0	93.0
I-06/30/76	22:53	0.0	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/30/76	22:53	-9.9	31.0	-9999.	14.55	0.0	0.0	137.4	0.0	137.4
I-06/30/76	23:40	0.3	24.0	-9999.	12.49	0.0	0.0	160.1	0.0	160.1
D-06/30/76	23:40	-9.9	30.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	00:25	0.4	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-07/01/76	00:25	-9.9	30.0	-9999.	15.25	0.0	0.0	196.8	0.0	196.8
I-07/01/76	19:29	-9.7	23.5	290.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:29	-9.9	33.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
I-07/01/76	20:21	-0.8	25.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/01/76	20:21	-9.9	31.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:05	-0.8	25.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:05	-9.9	34.0	-9999.	15.51	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:49	-0.5	25.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:49	-9.9	33.0	-9999.	14.56	0.0	0.0	137.4	0.0	137.4
I-07/01/76	22:32	-9.3	24.5	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:32	-9.9	32.5	-9999.	13.69	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:22	-0.1	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:22	-9.9	30.0	-9999.	15.25	0.0	0.0	328.0	0.0	328.0
I-07/01/76	23:59	0.0	24.5	-9999.	10.07	0.0	0.0	99.3	0.0	99.3
D-07/01/76	23:59	-9.9	30.5	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:42	0.2	24.5	205.	12.75	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:42	-9.9	31.0	-9999.	14.29	0.0	0.0	70.0	0.0	70.0
I-07/14/76	17:23	-0.6	27.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:23	-0.6	35.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:14	-0.7	24.0	260.	12.53	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:14	-0.7	32.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:58	-0.8	27.0	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:58	-0.8	31.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:46	-0.9	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:46	-9.9	28.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:56	-0.7	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:56	-9.9	30.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:37	-0.6	26.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:37	-9.9	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

WHITE PERCH

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	22:16	-0.4	24.0	200.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:16	-9.9	31.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	22:59	-0.2	25.5	-9999.	11.45	0.0	0.0	87.4	0.0	87.4
D-07/14/76	22:59	-9.9	28.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:42	0.0	26.0	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:42	-9.9	31.0	-9999.	14.53	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:25	0.1	24.5	200.	12.53	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:25	-9.9	29.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:08	-0.4	27.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:08	-9.9	33.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:00	-0.6	27.0	-9999.	9.31	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:00	-9.9	31.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:41	-0.7	27.0	-9999.	7.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:41	-9.9	33.5	-9999.	12.30	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:24	-0.7	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:24	-9.9	33.5	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:05	-0.8	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	20:05	-9.9	35.5	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:46	-0.9	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	20:46	-9.9	36.5	-9999.	12.13	0.0	0.0	0.0	0.0	0.0
I-07/15/76	21:52	-0.7	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:52	-9.9	36.5	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/15/76	22:34	-0.5	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:34	-9.9	33.0	-9999.	13.34	0.0	0.0	75.0	0.0	75.0
I-07/15/76	23:16	-0.3	26.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:16	-9.9	33.5	-9999.	14.03	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:57	-0.1	26.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:57	-9.9	31.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:38	0.0	26.0	-9999.	12.75	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:38	-9.9	31.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/03/76	23:39	-0.5	16.0	-9999.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/03/76	23:39	-9.9	17.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-06/04/76	00:23	-0.3	16.0	-9999.	11.50	0.0	0.0	0.0	0.0	0.0
D-06/04/76	00:23	-9.9	17.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-06/09/76	13:40	-0.9	22.0	135.	12.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	13:40	-9.9	28.0	-9999.	11.96	0.0	0.0	0.0	0.0	0.0
I-06/09/76	14:38	-1.2	21.0	130.	11.80	0.0	0.0	0.0	0.0	0.0
D-06/09/76	14:38	-9.9	28.0	-9999.	11.53	0.0	0.0	0.0	0.0	0.0
I-06/09/76	15:25	-0.9	19.5	130.	12.50	0.0	0.0	0.0	0.0	0.0
D-06/09/76	15:25	-9.9	28.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/09/76	16:20	-1.0	18.0	130.	12.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	16:20	-9.9	27.5	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/09/76	17:16	-0.6	17.0	125.	12.10	0.0	0.0	0.0	0.3	0.0
D-06/09/76	17:16	-9.9	26.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/09/76	18:53	0.0	17.0	120.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:53	-9.9	23.5	-9999.	15.59	0.0	64.1	64.1	0.0	128.2
I-06/09/76	19:35	0.3	17.0	120.	12.30	0.0	0.0	0.0	0.0	0.0
D-06/09/76	19:35	-9.9	20.0	-9999.	15.59	0.0	128.3	0.0	0.0	128.3
I-06/09/76	20:19	-0.3	17.0	120.	12.00	0.0	166.7	0.0	0.0	166.7
D-06/09/76	20:19	-9.9	20.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:03	0.5	17.5	120.	11.60	0.0	0.0	0.0	0.0	0.0
D-06/09/76	21:03	-9.9	20.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	17:10	-1.0	19.0	132.	13.50	0.0	0.0	0.0	0.0	0.0
D-06/10/76	17:10	-9.9	27.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:00	-0.6	18.0	13000.	12.40	0.0	80.6	80.6	0.0	161.2
D-06/10/76	18:00	-9.9	26.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:50	-0.3	17.2	130.	12.20	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:50	-9.9	25.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:25	0.1	18.2	130.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:25	-9.9	22.5	-9999.	19.89	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	21:09	0.3	18.0	130.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/10/76	21:09	-9.9	23.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	21:55	0.3	18.0	132.	13.40	0.0	0.0	0.0	0.0	0.0
D-06/10/76	21:55	-9.9	23.5	-9999.	10.76	0.0	0.0	93.0	0.0	93.0
I-06/10/76	23:19	0.1	18.0	131.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/10/76	23:19	-9.9	20.5	-9999.	15.07	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:03	0.0	18.0	132.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:03	-9.9	21.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:45	-0.2	18.7	133.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/11/76	00:45	-9.9	21.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/16/76	17:12	-0.3	21.0	150.	10.41	0.0	192.1	0.0	0.0	192.1
D-06/16/76	17:12	-9.9	28.5	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/16/76	18:02	-0.4	21.0	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:02	-9.9	28.5	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/16/76	18:53	-0.6	21.0	145.	10.76	0.0	0.0	93.0	0.0	93.0
D-06/16/76	18:53	-9.9	29.0	-9999.	12.48	0.0	0.0	480.9	0.0	480.9
I-06/16/76	19:39	-0.8	22.0	150.	10.07	0.0	198.6	198.6	0.0	397.2
D-06/16/76	19:39	-9.9	30.5	-9999.	12.48	0.0	80.2	641.2	0.0	721.4
I-06/16/76	20:24	-0.8	21.5	160.	8.63	0.0	347.6	231.8	0.0	579.4
D-06/16/76	20:24	-9.9	30.5	-9999.	11.44	0.0	0.0	611.7	0.0	611.7
I-06/16/76	21:11	-0.8	21.5	145.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/16/76	21:11	-9.9	30.5	-9999.	12.48	0.0	0.0	160.3	0.0	160.3
I-06/16/76	22:36	-0.7	20.5	140.	9.39	0.0	106.5	0.0	0.0	106.5
D-06/16/76	22:36	-9.9	29.0	-9999.	12.48	0.0	0.0	240.5	0.0	240.5
I-06/16/76	23:40	-0.4	20.0	130.	12.84	0.0	0.0	77.9	0.0	77.9
D-06/16/76	23:40	-9.9	34.0	-9999.	15.33	0.0	0.0	65.2	0.0	65.2
I-06/17/76	00:21	-0.2	19.5	130.	11.71	0.0	0.0	0.0	0.0	0.0
D-06/17/76	00:21	-9.9	24.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	16:48	-0.2	20.5	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:48	-9.9	28.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	17:29	-0.3	21.0	160.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	17:29	-9.9	28.0	-9999.	13.51	0.0	0.0	222.0	0.0	222.0
I-06/17/76	18:09	-0.4	21.0	170.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:09	-9.9	28.0	-9999.	12.82	0.0	0.0	156.0	0.0	156.0
I-06/17/76	18:49	-0.3	19.0	170.	9.73	0.0	0.0	3.0	0.0	0.0
D-06/17/76	18:49	-9.9	28.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
I-06/17/76	19:27	-0.7	21.5	150.	11.45	0.0	0.0	611.6	0.0	611.6
D-06/17/76	19:27	-9.9	27.0	-9999.	12.22	0.0	0.0	409.2	0.0	409.2
I-06/17/76	20:03	-0.8	21.5	180.	9.85	0.0	0.0	110.5	0.0	110.5
D-06/17/76	20:03	-9.9	27.0	-9999.	12.43	0.0	0.0	80.2	0.0	80.2
I-06/17/76	20:50	-0.9	27.0	-9999.	9.73	0.0	205.6	0.0	0.0	205.6
D-06/17/76	20:50	-9.9	27.0	-9999.	12.74	0.0	0.0	0.0	0.0	0.0
I-06/17/76	21:59	-1.0	22.0	190.	11.79	0.0	0.0	169.6	0.0	169.6
D-06/17/76	21:59	-9.9	27.5	-9999.	12.99	0.0	0.0	0.0	0.0	0.0
I-06/17/76	22:40	-0.9	21.0	185.	10.07	0.0	198.6	297.9	0.0	496.5
D-06/17/76	22:40	-9.9	25.5	-9999.	13.69	0.0	0.0	584.5	0.0	584.5
I-06/17/76	23:22	-0.8	19.0	145.	10.07	0.0	99.3	893.7	0.0	993.0
D-06/17/76	23:22	-9.9	28.0	-9999.	13.51	0.0	370.0	296.0	0.0	666.0
I-06/17/76	23:59	-0.6	20.0	140.	12.84	0.0	623.1	389.4	0.0	1012.5
D-06/17/76	23:59	-9.9	26.0	-9999.	14.81	0.0	67.5	1215.3	0.0	1282.8
I-06/18/76	00:40	0.4	20.0	130.	12.84	0.0	155.8	77.9	0.0	233.7
D-06/18/76	00:40	-9.9	25.0	-9999.	14.55	0.0	68.7	206.2	0.0	274.9
I-06/23/76	16:35	-0.6	22.0	-9999.	14.25	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:35	-9.9	31.5	-9999.	16.64	0.0	0.0	0.0	0.0	0.0
I-06/23/76	17:28	-0.4	22.1	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:28	-9.9	31.0	-9999.	16.64	0.0	0.0	0.0	0.0	0.0
I-06/23/76	18:14	-0.2	21.8	150.	8.83	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:14	-9.9	31.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/23/76	19:00	-0.1	22.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/23/76	19:00	-9.9	31.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	-0.1	22.0	-9999.	14.08	0.0	0.0	355.2	0.0	355.2
D-06/23/76	19:42	-9.9	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0
I-06/23/76	20:26	0.1	22.5	-9999.	11.01	0.0	0.0	272.4	0.0	272.4
D-06/23/76	20:26	-9.9	31.5	-9999.	15.33	0.0	0.0	326.1	0.0	326.1
I-06/23/76	21:10	0.2	22.7	220.	12.49	0.0	0.0	240.2	0.0	240.2
D-06/23/76	21:10	-9.9	31.0	-9999.	15.33	0.0	0.0	195.7	0.0	195.7
I-06/23/76	22:27	0.0	23.0	-9999.	11.45	0.0	0.0	174.7	0.0	174.7
D-06/23/76	22:27	-9.9	29.5	-9999.	14.03	0.0	71.3	71.3	0.0	142.6
I-06/23/76	23:08	-0.3	22.5	-9999.	9.81	0.0	0.0	509.5	0.0	509.5
D-06/23/76	23:08	-9.9	27.5	-9999.	13.17	0.0	75.9	75.9	0.0	151.8
I-06/23/76	23:55	-0.4	23.0	-9999.	12.49	0.0	0.0	640.6	0.0	640.6
D-06/23/76	23:55	-9.9	28.5	-9999.	15.07	0.0	0.0	398.1	0.0	398.1
I-06/24/76	00:35	-0.5	23.1	260.	13.54	0.0	0.0	0.0	0.0	0.0
D-06/24/76	00:35	-9.9	30.0	-9999.	15.59	0.0	0.0	192.4	0.0	192.4
I-06/24/76	16:28	-0.9	24.5	162.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:28	-9.9	32.5	-9999.	13.77	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:10	-0.7	22.5	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:10	-9.9	32.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/24/76	17:53	-0.5	22.5	-9999.	10.76	0.0	0.0	93.0	0.0	93.0
D-06/24/76	17:53	-9.9	31.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-06/24/76	18:36	-0.3	22.5	-9999.	15.33	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:36	-9.9	31.0	-9999.	16.29	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:16	-0.1	22.5	-9999.	10.24	0.0	0.0	97.6	0.0	97.6
D-06/24/76	19:16	-9.9	29.0	-9999.	14.73	0.0	0.0	0.0	0.0	0.0
I-06/24/76	20:04	0.0	22.5	410.	11.97	0.0	0.0	167.2	0.0	167.2
D-06/24/76	20:04	-9.9	29.5	-9999.	15.59	0.0	64.1	320.6	0.0	384.7
I-06/24/76	20:45	0.1	22.5	-9999.	11.27	0.0	0.0	354.8	0.0	354.8
D-06/24/76	20:45	-9.9	29.0	-9999.	15.25	0.0	65.6	787.1	0.0	852.7
I-06/24/76	22:11	0.1	23.5	-9999.	12.14	0.0	0.0	164.7	0.0	164.7
D-06/24/76	22:11	-9.9	30.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	22:53	-0.1	23.0	-9999.	13.19	0.0	0.0	151.6	0.0	151.6
D-06/24/76	22:53	-9.9	29.0	-9999.	15.25	0.0	0.0	196.8	0.0	196.8
I-06/24/76	23:35	-0.1	23.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/24/76	23:35	-9.9	29.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/25/76	00:18	-0.3	23.5	-9999.	10.07	0.0	0.0	297.9	0.0	297.9
D-06/25/76	00:18	-9.9	29.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/25/76	00:59	-0.4	24.0	600.	10.93	0.0	0.0	0.0	0.0	0.0
D-06/25/76	00:59	-9.9	29.0	-9999.	14.38	0.0	0.0	139.1	0.0	139.1
I-06/28/76	17:34	-0.9	27.0	1000.	11.97	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:34	-9.9	33.0	950.	15.77	0.0	0.0	253.7	0.0	253.7
I-06/28/76	18:33	-0.9	25.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:33	-9.9	34.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:22	-0.8	24.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:23	-9.9	34.0	-9999.	13.59	0.0	0.0	64.1	0.0	64.1
I-06/28/76	20:02	-0.6	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/28/76	20:02	-9.9	32.5	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:51	-0.2	23.5	1000.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	20:51	-9.9	33.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	21:33	0.0	24.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/28/76	21:33	-9.9	32.5	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	23:25	0.3	24.0	-9999.	17.50	0.0	0.0	0.0	0.0	0.0
D-06/28/76	23:25	-9.9	30.0	-9999.	15.36	0.0	0.0	130.2	0.0	130.2
I-06/29/76	00:08	0.2	24.0	-9999.	13.54	0.0	0.0	147.6	0.0	147.6
D-06/29/76	00:08	-9.9	31.0	-9999.	12.65	0.0	0.0	79.1	0.0	79.1
I-06/29/76	00:43	-0.2	24.0	1050.	12.14	0.0	0.0	82.4	0.0	82.4
D-06/29/76	00:43	-9.9	33.0	-9999.	11.44	0.0	0.0	174.8	0.0	174.8
I-06/29/76	18:23	-0.9	24.9	670.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	18:23	-9.9	33.0	-9999.	11.61	0.0	0.0	86.1	0.0	86.1
I-06/29/76	19:15	-0.9	25.0	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:15	-9.9	31.0	-9999.	11.87	0.0	0.0	84.2	0.0	84.2

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	20:00	-1.0	25.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:00	-9.9	32.0	-9999.	12.13	0.0	0.0	0.0	0.0	0.0
I-06/29/76	20:47	-0.6	24.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:47	-9.9	31.0	-9999.	13.69	0.0	0.0	73.1	0.0	73.1
I-06/29/76	21:29	-0.3	23.7	390.	12.31	0.0	0.0	0.0	0.0	0.0
D-06/29/76	21:29	-9.9	31.5	-9999.	14.29	0.0	0.0	349.9	0.0	349.9
I-06/29/76	22:11	0.0	24.0	-9999.	12.75	0.0	0.0	548.9	0.0	548.9
D-06/29/76	22:11	-9.9	30.0	-9999.	15.07	0.0	0.0	66.3	0.0	66.3
I-06/29/76	22:54	0.2	24.0	-9999.	11.10	0.0	0.0	360.4	0.0	360.4
D-06/29/76	22:54	-9.9	30.0	-9999.	18.30	0.0	0.0	218.6	0.0	218.6
I-06/29/76	23:35	0.3	24.0	-9999.	12.84	0.0	0.0	311.5	0.0	311.5
D-06/29/76	23:35	-9.9	29.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/30/76	00:22	0.3	23.5	760.	14.25	0.0	0.0	420.9	0.0	420.9
D-06/30/76	00:22	-9.9	29.5	-9999.	15.94	0.0	0.0	690.0	0.0	690.0
I-06/30/76	16:49	-0.3	23.0	1200.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/30/76	16:40	-9.9	33.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/30/76	17:44	-0.6	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:44	-9.9	28.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/30/76	18:33	-0.7	25.0	-9999.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/30/76	18:33	-9.9	33.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-06/30/76	20:18	-0.7	25.0	-9999.	7.54	0.0	0.0	0.0	0.0	0.0
D-06/30/76	20:18	-9.9	32.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/30/76	21:03	-0.4	25.0	-9999.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/30/76	21:03	-9.9	32.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:02	-0.2	24.0	-9999.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:02	-9.9	32.0	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:53	0.0	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/30/76	22:53	-9.9	31.0	-9999.	14.55	0.0	0.0	137.4	0.0	137.4
I-06/30/76	23:40	0.3	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/30/76	23:40	-9.9	30.5	-9999.	15.59	0.0	0.0	128.3	0.0	128.3

I=INTAKE; D=DISCHARGE

STRIPED BASS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	00:25	0.4	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	00:25	-9.9	30.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/01/76	19:29	-0.7	23.5	290.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:29	-9.9	33.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
I-07/01/76	20:21	-0.8	25.0	-9999.	9.65	0.0	0.0	0.0	0.0	0.0
D-07/01/76	20:21	-9.9	31.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:05	-0.8	25.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:05	-9.9	34.0	-9999.	15.51	0.0	0.0	64.5	0.0	64.5
I-07/01/76	21:49	-0.5	25.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:49	-9.9	33.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-07/01/76	22:32	-0.3	24.5	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:32	-9.9	32.5	-9999.	13.69	0.0	0.0	146.1	0.0	146.1
I-07/01/76	23:22	-0.1	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-07/01/76	23:22	-9.9	30.0	-9999.	15.25	0.0	0.0	459.1	0.0	459.1
I-07/01/76	23:59	0.0	24.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:59	-9.9	30.5	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:42	0.2	24.5	205.	12.75	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:42	-9.9	31.0	-9999.	14.29	0.0	0.0	70.0	0.0	70.0
I-07/14/76	17:23	-0.6	27.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:23	-0.6	35.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:14	-0.7	24.0	200.	12.58	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:14	-0.7	32.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:58	-0.8	27.0	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:58	-0.8	31.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:46	-0.9	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:46	-9.9	28.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:56	-0.7	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:56	-9.9	30.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:37	-0.6	26.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:37	-9.9	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	00:25	0.4	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	00:25	-9.9	30.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/01/76	19:29	-0.7	23.5	250.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:29	-9.9	33.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
I-07/01/76	20:21	-0.8	25.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/01/76	20:21	-9.9	31.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:05	-0.8	25.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:05	-9.9	34.0	-9999.	15.51	0.0	0.0	0.0	0.0	0.0
I-07/01/76	21:49	-0.5	25.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	21:49	-9.9	33.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-07/01/76	22:32	-0.3	24.5	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:32	-9.9	32.5	-9999.	13.69	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:22	-0.1	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:22	-9.9	30.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/01/76	23:59	0.0	24.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:59	-9.9	30.5	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:42	0.2	24.5	285.	12.75	0.0	0.0	0.0	0.0	0.0
D-07/02/76	00:42	-9.9	31.0	-9999.	14.29	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:23	-0.6	27.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:23	-0.6	35.0	-9999.	13.51	0.0	0.0	148.0	0.0	148.0
I-07/14/76	18:14	-0.7	24.0	200.	12.58	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:14	-0.7	32.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-07/14/76	18:58	-0.8	27.0	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:58	-0.8	31.0	-9999.	12.82	0.0	0.0	78.0	0.0	78.0
I-07/14/76	19:46	-0.9	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:46	-9.9	33.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:56	-0.7	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:56	-9.9	30.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:37	-0.6	26.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:37	-9.9	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/14/76	22:16	-0.4	24.0	200.	9.99	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:16	-9.9	31.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-07/14/76	22:59	-0.2	25.5	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/14/76	22:59	-9.9	28.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
I-07/14/76	23:42	0.0	26.0	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
D-07/14/76	23:42	-9.9	31.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-07/15/76	00:25	0.1	24.5	200.	12.53	0.0	0.0	0.0	0.0	0.0
D-07/15/76	00:25	-9.9	29.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-07/15/76	17:08	-0.4	27.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/15/76	17:08	-9.9	33.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-07/15/76	18:00	-0.6	27.0	-9999.	9.31	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:00	-9.9	31.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/15/76	18:41	-0.7	27.0	-9999.	7.85	0.0	0.0	0.0	0.0	0.0
D-07/15/76	18:41	-9.9	33.5	-9999.	12.38	0.0	0.0	0.0	0.0	0.0
I-07/15/76	19:24	-0.7	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	19:24	-9.9	33.5	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/15/76	20:05	-0.8	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	20:05	-9.9	35.5	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-07/15/76	20:46	-0.9	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	20:46	-9.9	36.5	-9999.	12.13	0.0	0.0	164.9	0.0	164.9
I-07/15/76	21:52	-0.7	27.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/15/76	21:52	-9.9	36.5	-9999.	12.82	0.0	0.0	234.0	0.0	234.0
I-07/15/76	22:34	-0.5	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/15/76	22:34	-9.9	33.0	-9999.	13.34	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:16	-0.3	26.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:16	-9.9	33.5	-9999.	14.03	0.0	0.0	0.0	0.0	0.0
I-07/15/76	23:57	-0.1	26.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/15/76	23:57	-9.9	31.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/16/76	00:38	0.0	26.0	-9999.	12.75	0.0	0.0	0.0	0.0	0.0
D-07/16/76	00:38	-9.9	31.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/26/76	17:35	-1.0	25.8	5470.	8.97	0.0	0.0	0.0	0.0	0.0
D-07/26/76	17:35	-9.9	30.0	-9999.	14.20	0.0	0.0	0.0	0.0	0.0
I-07/26/76	18:24	-0.9	25.5	-9999.	9.39	6815.8	0.0	9584.7	0.0	9584.7
D-07/26/76	18:24	-9.9	33.4	-9999.	14.55	6940.8	0.0	9346.0	0.0	9346.0
I-07/26/76	19:02	-0.6	25.5	-9999.	9.05	2209.6	0.0	6407.7	0.0	6407.7
D-07/26/76	19:02	-9.9	30.0	-9999.	15.25	13446.3	0.0	16857.0	0.0	16857.0
I-07/26/76	20:20	-0.1	25.0	-9999.	11.79	2713.6	0.0	6105.6	0.0	6105.6
D-07/26/76	20:20	-9.9	32.5	-9999.	15.59	8849.9	0.0	5386.9	0.0	5386.9
I-07/26/76	21:10	0.5	25.0	-9999.	12.40	33461.8	0.0	7418.0	0.0	7418.0
D-07/26/76	21:10	-9.9	32.0	-9999.	16.90	58109.0	0.0	6509.1	0.0	6509.1
I-07/26/76	21:48	0.3	24.5	-9999.	11.79	20691.3	0.0	11193.7	0.0	11193.7
D-07/26/76	21:48	-9.9	32.5	-9999.	14.55	23158.9	0.0	5978.7	0.0	5978.7
I-07/26/76	23:20	0.3	24.5	7250.	12.84	33800.6	0.0	2803.7	0.0	2803.7
D-07/26/76	23:20	-9.9	30.5	-9999.	14.90	31479.5	335.6	6913.4	0.0	7249.0
I-07/27/76	00:02	0.2	25.5	-9999.	12.64	67757.0	0.0	4828.7	0.0	4828.7
D-07/27/76	00:02	-9.9	30.2	-9999.	15.59	96002.1	0.0	5002.1	0.0	5002.1
I-07/28/76	17:39	-0.9	27.0	-9999.	11.70	85.5	0.0	0.0	0.0	0.0
D-07/28/76	17:39	-9.9	37.0	-9999.	13.51	0.0	0.0	1036.1	0.0	1036.1
I-07/28/76	18:56	-0.9	27.0	-9999.	10.00	1800.0	0.0	200.0	0.0	200.0
D-07/28/76	18:56	-9.9	35.0	-9999.	13.51	2072.1	592.0	6660.5	0.0	7252.5
I-07/28/76	19:28	-0.9	25.5	-9999.	10.00	700.0	300.0	4300.0	0.0	4600.0
D-07/28/76	19:28	-9.9	34.5	-9999.	13.51	666.0	0.0	11248.8	0.0	11248.8
I-07/28/76	20:17	-0.7	25.5	-9999.	9.80	714.3	0.0	6938.8	0.0	6938.8
D-07/28/76	20:17	-9.9	32.5	-9999.	12.82	234.0	156.0	10763.3	0.0	10919.3
I-07/28/76	21:11	-0.3	25.5	-9999.	11.00	0.0	0.0	909.1	0.0	909.1
D-07/28/76	21:11	-9.9	35.0	-9999.	11.44	699.1	349.6	5418.3	0.0	5767.9
I-07/28/76	22:58	0.0	25.5	-9999.	13.40	64253.7	373.1	11194.0	0.0	11567.1
D-07/28/76	22:58	-9.9	31.5	-9999.	13.51	57871.9	1110.1	12210.8	74.0	13394.9
I-07/28/76	23:43	0.3	25.5	-9999.	11.00	26090.9	0.0	12090.9	0.0	12090.9
D-07/28/76	23:43	-9.9	30.[illegible]	-9999.	13.60	70004.7	588.3	15368.7	0.0	15957.0

I=INTAKE; D=DISCHARGE

BAY ANCHOVY

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/29/76	00:24	0.3	25.0	-9999.	11.60	69655.2	0.0	10431.0	0.0	10431.0
D-07/29/76	00:24	-9.9	32.0	-9999.	13.86	76486.5	268.6	8947.5	0.0	9236.1

I=INTAKE; D=DISCHARGE

ATLANTIC TOMCOD

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-03/18/76	18:00	-1.2	5.5	-9999.	5.73	0.0	174.4	0.0	0.0	174.4
D-03/18/76	18:00	-1.2	12.5	-9999.	13.20	0.0	227.3	0.0	0.0	227.3
I-03/18/76	18:45	-1.2	5.5	-9999.	7.05	0.0	0.0	0.0	0.0	0.0
D-03/18/76	18:40	-1.2	13.0	-9999.	13.20	0.0	303.0	0.0	0.0	303.0
I-03/18/76	19:28	-1.2	5.0	120.	6.72	0.0	446.7	0.0	0.0	446.7
D-03/18/76	19:30	-1.2	12.5	150.	13.20	0.0	378.8	0.0	0.0	378.8
I-03/18/76	20:25	-1.1	4.0	110.	7.71	0.0	259.4	259.4	0.0	518.8
D-03/18/76	20:22	-1.1	11.5	140.	13.20	0.0	151.5	151.5	0.0	303.0
I-03/18/76	21:15	-0.6	4.0	110.	5.73	0.0	523.2	0.0	0.0	523.2
D-03/18/76	21:16	-0.6	12.0	140.	13.20	0.0	303.0	0.0	0.0	303.0
I-03/18/76	22:05	-0.5	5.0	120.	7.71	0.0	648.5	0.0	0.0	648.5
D-03/18/76	22:02	-0.5	11.5	140.	13.20	0.0	227.3	0.0	0.0	227.3
I-03/18/76	22:53	-0.3	5.0	120.	4.12	0.0	485.5	0.0	0.0	485.5
D-03/18/76	22:45	-0.3	12.0	145.	13.20	0.0	75.8	0.0	0.0	75.8
I-03/18/76	23:50	-0.2	5.5	125.	7.71	0.0	0.0	0.0	0.0	0.0
D-03/18/76	23:50	-0.2	11.5	145.	13.20	0.0	151.5	75.8	0.0	227.3
I-03/22/76	18:09	-0.6	4.5	110.	118.70	0.0	101.1	75.8	0.0	176.9
D-03/22/76	18:15	-0.6	11.5	135.	59.20	0.0	287.2	0.0	0.0	287.2
I-03/22/76	19:13	-0.7	4.5	110.	118.70	0.0	160.1	50.5	0.0	210.6
D-03/22/76	19:10	-0.7	12.5	135.	76.10	0.0	92.0	39.4	0.0	131.4
I-03/22/76	20:09	-0.9	6.5	120.	118.70	0.0	387.5	25.3	0.0	412.8
D-03/22/76	20:13	-0.9	14.5	145.	56.20	0.0	89.0	17.8	0.0	106.8
I-03/22/76	21:19	-1.0	6.0	120.	118.70	0.0	345.4	92.7	0.0	438.1
D-03/22/76	21:20	-1.0	14.5	140.	83.90	0.0	369.5	0.0	0.0	369.5
I-03/22/76	22:31	-1.0	7.0	115.	118.70	0.0	235.9	67.4	0.0	303.3
D-03/22/76	22:36	-1.0	13.0	130.	80.30	0.0	99.6	24.9	0.0	124.5
I-03/22/76	23:31	-0.9	5.5	-9999.	118.70	0.0	50.5	8.4	0.0	58.9
D-03/22/76	23:37	-0.9	10.0	125.	42.80	0.0	46.8	0.0	0.0	46.8
I-03/23/76	00:31	-0.7	5.5	110.	118.70	0.0	16.8	8.4	0.0	25.2
D-03/23/76	00:35	-0.7	11.0	130.	29.60	0.0	67.6	0.0	0.0	67.6

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-05/27/76	00:35	-0.2	16.0	130.	12.00	0.0	0.0	0.0	0.0	0.0
D-05/27/76	00:35	-9.9	20.5	130.	12.60	0.0	0.0	83.3	0.0	83.3
I-06/01/76	21:34	-0.6	15.5	130.	11.80	0.0	0.0	1016.9	0.0	1016.9
D-06/01/76	21:34	-9.9	16.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/01/76	23:10	-0.2	15.0	130.	11.70	0.0	0.0	1965.8	0.0	1965.8
D-06/01/76	23:10	-9.9	15.5	-9999.	13.51	0.0	0.0	370.0	0.0	370.0
I-06/02/76	00:35	0.2	15.0	130.	11.50	0.0	0.0	1739.1	0.0	1739.1
D-06/02/76	00:35	-9.9	15.5	-9999.	13.51	0.0	0.0	592.0	0.0	592.0
I-06/02/76	19:09	-0.5	17.0	139.	11.60	0.0	0.0	86.2	0.0	86.2
D-06/02/76	19:09	-9.9	17.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/02/76	20:20	-0.6	17.0	139.	10.50	0.0	0.0	666.7	0.0	666.7
D-06/02/76	20:20	-9.9	17.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/02/76	21:15	-0.7	16.5	139.	11.60	0.0	0.0	4224.1	0.0	4224.1
D-06/02/76	21:15	-9.9	17.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/02/76	22:55	-0.3	15.5	137.	12.10	0.0	0.0	3636.3	0.0	3636.3
D-06/02/76	22:55	-9.9	14.0	-9999.	14.55	0.0	0.0	4123.2	0.0	4123.2
I-06/02/76	23:48	-9.9	15.5	140.	11.90	0.0	0.0	1428.5	0.0	1428.5
D-06/02/76	23:48	-9.9	16.5	-9999.	14.55	0.0	0.0	9552.2	0.0	9552.2
I-06/03/76	18:37	-0.5	17.0	-9999.	10.10	0.0	0.0	2574.2	0.0	2574.2
D-06/03/76	18:37	-9.9	17.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/03/76	19:39	-0.6	18.0	-9999.	11.60	0.0	0.0	603.4	0.0	603.4
D-06/03/76	19:39	-9.9	17.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/03/76	20:16	-0.7	17.5	-9999.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/03/76	20:16	-9.9	17.5	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/03/76	20:59	-0.8	17.5	-9999.	12.10	0.0	0.0	2148.8	0.0	2148.8
D-06/03/76	20:59	-9.9	17.0	-9999.	14.55	0.0	0.0	412.3	0.0	412.3
I-06/03/76	22:12	-0.8	17.0	-9999.	11.80	0.0	0.0	2542.3	0.0	2542.3
D-06/03/76	22:12	-9.9	17.0	-9999.	15.25	0.0	0.0	1049.5	0.0	1049.5
I-06/03/76	22:55	-0.7	16.5	-9999.	11.90	0.0	0.0	3277.3	0.0	3277.3
D-06/03/76	22:55	-9.9	17.0	-9999.	15.25	0.0	0.0	1049.5	0.0	1049.5

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/03/76	23:39	-0.5	16.0	-9999.	12.10	0.0	0.0	1322.3	0.0	1322.3
D-06/03/76	23:39	-9.9	17.0	-9999.	15.25	0.0	0.0	2558.0	0.0	2558.0
I-06/04/76	00:23	-0.3	16.0	-9999.	11.50	0.0	0.0	956.5	0.0	956.5
D-06/04/76	00:23	-9.9	17.0	-9999.	15.25	0.0	0.0	6034.4	0.0	6034.4
I-06/09/76	13:40	-0.9	22.0	135.	12.70	0.0	0.0	0.0	0.0	0.0
D-06/09/76	13:40	-9.9	28.0	-9999.	11.96	0.0	0.0	0.0	0.0	0.0
I-06/09/76	14:38	-1.2	21.0	130.	11.80	0.0	0.0	0.0	0.0	0.0
D-06/09/76	14:38	-9.9	23.0	-9999.	11.53	0.0	0.0	173.5	0.0	173.5
I-06/09/76	15:25	-0.9	19.5	130.	12.50	0.0	0.0	240.0	0.0	240.0
D-06/09/76	15:25	-9.9	28.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/09/76	16:20	-1.0	18.0	130.	12.70	0.0	0.0	236.2	0.0	236.2
D-06/09/76	16:20	-9.9	27.5	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/09/76	17:16	-0.6	17.0	125.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/09/76	17:16	-9.9	26.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/09/76	18:53	0.0	17.0	120.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/09/76	18:53	-9.9	23.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/09/76	19:35	0.3	17.0	120.	12.30	0.0	0.0	0.0	0.0	0.0
D-06/09/76	19:35	-9.9	20.0	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/09/76	20:19	-0.3	17.0	120.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/09/76	20:19	-9.9	23.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/09/76	21:03	0.5	17.5	120.	11.60	0.0	0.0	86.2	0.0	86.2
D-06/09/76	21:03	-9.9	20.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	17:10	-1.0	19.0	132.	13.50	0.0	0.0	222.2	74.1	296.3
D-06/10/76	17:10	-9.9	27.0	-9999.	14.55	0.0	0.0	274.9	0.0	274.9
I-06/10/76	18:00	-0.6	18.0	13000.	12.40	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:00	-9.9	26.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/10/76	18:50	-0.3	17.2	130.	12.20	0.0	0.0	0.0	0.0	0.0
D-06/10/76	18:50	-9.9	25.5	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	20:25	0.1	18.2	130.	12.10	0.0	0.0	0.0	0.0	0.0
D-06/10/76	20:25	-9.9	22.5	-9999.	19.09	0.0	0.0	104.8	0.0	104.8

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY (NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/10/76	21:09	0.3	18.0	130.	11.90	0.0	0.0	0.0	0.0	0.0
D-06/10/76	21:09	-9.9	23.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/10/76	21:55	0.3	18.0	132.	13.40	0.0	0.0	74.6	0.0	74.6
D-06/10/76	21:55	-9.9	23.5	-9999.	10.76	0.0	0.0	186.0	0.0	186.0
I-06/10/76	23:19	0.1	18.0	131.	12.00	0.0	0.0	0.0	0.0	0.0
D-06/10/76	23:19	-9.9	20.5	-9999.	15.07	0.0	0.0	0.0	0.0	0.0
I-06/11/76	00:03	0.0	18.0	132.	12.00	0.0	0.0	83.3	0.0	83.3
D-06/11/76	00:03	-9.9	21.0	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/11/76	00:45	-0.2	18.7	133.	12.00	0.0	0.0	166.7	0.0	166.7
D-06/11/76	00:45	-9.9	21.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/16/76	17:12	-0.3	21.0	150.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/16/76	17:12	-9.9	28.5	-9999.	14.55	0.0	0.0	274.9	0.0	274.9
I-06/16/76	18:02	-0.4	21.0	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:02	-9.9	28.5	-9999.	12.43	0.0	0.0	0.0	0.0	0.0
I-06/16/76	18:53	-0.6	21.0	145.	10.75	0.0	0.0	0.0	0.0	0.0
D-06/16/76	18:53	-9.9	29.0	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/16/76	19:39	-0.8	22.0	150.	10.07	0.0	0.0	198.6	0.0	198.6
D-06/16/76	19:39	-9.9	30.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-06/16/76	20:24	-0.8	21.5	160.	8.63	0.0	0.0	579.4	0.0	579.4
D-06/16/76	20:24	-9.9	30.5	-9999.	11.44	0.0	0.0	437.0	0.0	437.0
I-06/16/76	21:11	-0.8	21.5	145.	10.07	0.0	0.0	99.3	0.0	99.3
D-06/16/76	21:11	-9.9	30.5	-9999.	12.48	0.0	0.0	240.5	0.0	240.5
I-06/16/76	22:36	-0.7	20.5	140.	8.39	0.0	0.0	0.0	0.0	0.0
D-06/16/76	22:36	-9.9	29.0	-9999.	12.48	0.0	0.0	480.9	0.0	480.9
I-06/16/76	23:40	-0.4	20.0	130.	12.84	0.0	0.0	233.6	0.0	233.6
D-06/16/76	23:40	-9.9	34.0	-9999.	15.33	0.0	0.0	260.9	0.0	260.9
I-06/17/76	00:21	-0.2	19.5	130.	11.71	0.0	0.0	0.0	0.0	0.0
D-06/17/76	00:21	-9.9	24.0	-9999.	13.51	0.0	0.0	148.0	0.0	148.0
I-06/17/76	16:48	-0.2	20.5	150.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	16:48	-9.9	28.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/17/76	17:29	-0.3	21.0	160.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	17:29	-9.9	28.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:09	-0.4	21.0	170.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:09	-9.9	28.0	-9999.	12.62	0.0	0.0	0.0	0.0	0.0
I-06/17/76	18:49	-0.3	19.0	170.	9.73	0.0	0.0	0.0	0.0	0.0
D-06/17/76	18:49	-9.9	28.0	-9999.	13.86	0.0	0.0	0.0	0.0	0.0
I-06/17/76	19:27	-0.7	21.5	150.	11.45	0.0	0.0	87.4	0.0	87.4
D-06/17/76	19:27	-9.9	27.0	-9999.	12.22	0.0	0.0	81.8	0.0	81.8
I-06/17/76	20:09	-0.8	21.5	180.	9.05	0.0	0.0	0.0	0.0	0.0
D-06/17/76	20:09	-9.9	27.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-06/17/76	20:50	-0.9	27.0	-9999.	9.73	0.0	0.0	205.6	0.0	205.6
D-06/17/76	20:50	-9.9	27.0	-9999.	12.74	0.0	0.0	0.0	0.0	0.0
I-06/17/76	21:59	-1.0	22.0	190.	11.79	0.0	0.0	84.8	0.0	84.8
D-06/17/76	21:59	-9.9	27.5	-9999.	12.99	0.0	0.0	77.0	0.0	77.0
I-06/17/76	22:40	-0.9	21.0	185.	10.07	0.0	0.0	99.3	0.0	99.3
D-06/17/76	22:40	-9.9	25.5	-9999.	13.69	0.0	0.0	146.1	0.0	146.1
I-06/17/76	23:22	-0.8	19.0	145.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:22	-9.9	28.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/17/76	23:59	-0.6	20.0	140.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/17/76	23:59	-9.9	26.0	-9999.	14.81	0.0	0.0	67.5	0.0	67.5
I-06/18/76	00:40	0.4	20.0	130.	12.84	0.0	0.0	155.8	0.0	155.8
D-06/18/76	00:40	-9.9	25.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/23/76	16:35	-0.6	22.0	-9999.	14.25	0.0	0.0	0.0	0.0	0.0
D-06/23/76	16:35	-9.9	31.5	-9999.	16.64	0.0	0.0	0.0	0.0	0.0
I-06/23/76	17:28	-0.4	22.1	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/23/76	17:28	-9.9	31.0	-9999.	16.64	0.0	0.0	60.1	0.0	60.1
I-06/23/76	18:14	-0.2	21.8	150.	8.88	0.0	0.0	0.0	0.0	0.0
D-06/23/76	18:14	-9.9	31.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-06/23/76	19:00	-0.1	22.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:00	-9.9	31.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/23/76	19:42	-0.1	22.0	-9999.	14.08	0.0	0.0	0.0	0.0	0.0
D-06/23/76	19:42	-9.9	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0
I-06/23/76	20:26	0.1	22.5	-9999.	11.01	0.0	0.0	0.0	0.0	0.0
D-06/23/76	20:26	-9.9	31.5	-9999.	15.33	0.0	0.0	195.7	0.0	195.7
I-06/23/76	21:10	0.2	22.7	220.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/23/76	21:10	-9.9	31.0	-9999.	15.33	0.0	0.0	0.0	0.0	0.0
I-06/23/76	22:27	0.0	23.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/23/76	22:27	-9.9	29.5	-9999.	14.03	0.0	0.0	0.0	71.3	71.3
I-06/23/76	23:08	-0.3	22.5	-9999.	9.81	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:08	-9.9	27.5	-9999.	13.17	0.0	0.0	0.0	0.0	0.0
I-06/23/76	23:55	-0.4	23.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/23/76	23:55	-9.9	28.5	-9999.	15.07	0.0	0.0	0.0	0.0	0.0
I-06/24/76	00:35	-0.5	23.1	260.	13.54	0.0	0.0	0.0	0.0	0.0
D-06/24/76	00:35	-9.9	30.0	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/24/76	16:28	-0.9	24.5	162.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/24/76	16:28	-9.9	32.5	-9999.	13.77	0.0	0.0	72.6	0.0	72.6
I-06/24/76	17:10	-0.7	22.5	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/24/76	17:10	-9.9	32.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/24/76	17:53	-0.5	22.5	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
D-06/24/76	17:53	-9.9	31.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-06/24/76	18:36	-0.3	22.5	-9999.	15.33	0.0	0.0	0.0	0.0	0.0
D-06/24/76	18:36	-9.9	31.0	-9999.	16.29	0.0	0.0	0.0	0.0	0.0
I-06/24/76	19:16	-0.1	22.5	-9999.	10.24	0.0	0.0	0.0	0.0	0.0
D-06/24/76	19:16	-9.9	29.0	-9999.	14.73	0.0	0.0	67.9	0.0	67.9
I-06/24/76	20:04	0.0	22.5	410.	11.97	0.0	0.0	0.0	0.0	0.0
D-06/24/76	20:04	-9.9	29.5	-9999.	15.59	0.0	0.0	256.5	0.0	256.5
I-06/24/76	20:45	0.1	22.5	-9999.	11.27	0.0	0.0	443.5	0.0	443.5
D-06/24/76	20:45	-9.9	29.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6
I-06/24/76	22:11	0.1	23.5	-9999.	12.14	0.0	0.0	329.5	0.0	329.5
D-06/24/76	22:11	-9.9	30.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/24/76	22:53	-0.1	23.0	-9999.	13.19	0.0	0.0	75.8	0.0	75.8
D-06/24/76	22:53	-9.9	29.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-06/24/76	23:35	-0.1	23.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/24/76	23:35	-9.9	29.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/25/76	00:18	-0.3	23.5	-9999.	10.07	0.0	0.0	99.3	0.0	99.3
D-06/25/76	00:18	-9.9	29.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-06/25/76	00:59	-0.4	24.0	600.	10.93	0.0	0.0	274.5	0.0	274.5
D-06/25/76	00:59	-9.9	29.0	-9999.	14.38	0.0	0.0	69.5	0.0	69.5
I-06/28/76	17:34	-0.9	27.0	1000.	11.97	0.0	0.0	0.0	0.0	0.0
D-06/28/76	17:34	-9.9	33.0	950.	15.77	0.0	0.0	63.4	0.0	63.4
I-06/28/76	18:33	-0.9	25.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	18:33	-9.9	34.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	19:23	-0.8	24.0	-9999.	12.84	0.0	0.0	0.0	0.0	0.0
D-06/28/76	19:23	-9.9	34.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	20:02	-0.6	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-06/28/76	20:02	-9.9	32.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/28/76	20:51	-0.2	23.5	1000.	12.84	0.0	0.0	77.9	0.0	77.9
D-06/28/76	20:51	-9.9	33.0	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/28/76	21:33	0.0	24.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-06/28/76	21:33	-9.9	32.5	-9999.	15.59	0.0	0.0	64.1	0.0	64.1
I-06/28/76	23:25	0.3	24.0	-9999.	17.50	0.0	0.0	57.1	0.0	57.1
D-06/28/76	23:25	-9.9	30.0	-9999.	15.36	0.0	0.0	260.4	0.0	260.4
I-06/29/76	00:08	0.2	24.0	-9999.	13.54	0.0	0.0	147.7	0.0	147.7
D-06/29/76	00:08	-9.9	31.0	-9999.	12.65	0.0	0.0	237.2	0.0	237.2
I-06/29/76	00:43	-0.2	24.0	1050.	12.14	0.0	0.0	0.0	0.0	0.0
D-06/29/76	00:43	-9.9	33.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/29/76	18:23	-0.9	24.9	670.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	18:23	-9.9	33.0	-9999.	11.61	0.0	0.0	86.1	0.0	86.1
I-06/29/76	19:15	-0.9	25.6	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-06/29/76	19:15	-9.9	31.6	-9999.	11.87	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-06/29/76	20:00	-1.0	25.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:00	-9.9	32.0	-9999.	12.13	0.0	0.0	247.3	0.0	247.3
I-06/29/76	20:47	-0.6	24.0	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-06/29/76	20:47	-9.9	31.0	-9999.	13.69	0.0	0.0	0.0	0.0	0.0
I-06/29/76	21:29	-0.3	23.7	390.	12.31	0.0	0.0	162.4	0.0	162.4
D-06/29/76	21:29	-9.9	31.5	-9999.	14.29	0.0	0.0	0.0	0.0	0.0
I-06/29/76	22:11	0.0	24.0	-9999.	12.75	0.0	0.0	78.4	0.0	78.4
D-06/29/76	22:11	-9.9	30.0	-9999.	15.07	0.0	0.0	66.3	0.0	66.3
I-06/29/76	22:54	0.2	24.0	-9999.	11.10	0.0	0.0	0.0	0.0	0.0
D-06/29/76	22:54	-9.9	30.0	-9999.	18.30	0.0	0.0	0.0	0.0	0.0
I-06/29/76	23:35	0.3	24.0	-9999.	12.84	0.0	0.0	77.9	0.0	77.9
D-06/29/76	23:35	-9.9	29.5	-9999.	15.59	0.0	0.0	0.0	0.0	0.0
I-06/30/76	00:22	0.3	23.5	760.	14.25	0.0	0.0	210.5	0.0	210.5
D-06/30/76	00:22	-9.9	29.5	-9999.	15.94	0.0	0.0	0.0	0.0	0.0
I-06/30/76	16:40	-0.3	23.0	1200.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/30/76	16:40	-9.9	33.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/30/76	17:44	-0.6	25.0	-9999.	10.41	0.0	0.0	0.0	0.0	0.0
D-06/30/76	17:44	-9.9	28.0	-9999.	11.44	0.0	0.0	0.0	0.0	0.0
I-06/30/76	18:33	-0.7	25.0	-9999.	11.27	0.0	0.0	0.0	0.0	0.0
D-06/30/76	18:33	-9.9	33.0	-9999.	12.48	0.0	0.0	80.2	0.0	80.2
I-06/30/76	20:18	-0.7	25.0	-9999.	7.54	0.0	0.0	0.0	0.0	0.0
D-06/30/76	20:18	-9.9	32.0	-9999.	11.44	0.0	0.0	87.4	0.0	87.4
I-06/30/76	21:03	-0.4	25.0	-9999.	11.79	0.0	0.0	254.4	0.0	254.4
D-06/30/76	21:03	-9.9	32.0	-9999.	13.51	0.0	0.0	74.0	0.0	74.0
I-06/30/76	22:02	-0.2	24.0	-9999.	11.79	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:02	-9.9	32.0	-9999.	10.76	0.0	0.0	0.0	0.0	0.0
I-06/30/76	22:53	0.0	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-06/30/76	22:53	-9.9	31.0	-9999.	14.55	0.0	0.0	0.0	0.0	0.0
I-06/30/76	23:40	0.3	24.0	-9999.	12.49	0.0	0.0	160.1	0.0	160.1
D-06/30/76	23:40	-9.9	30.5	-9999.	15.59	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

CLUPEIDS

STATION-DATE	TIME (HR:MIN)	TIDE (M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
I-07/01/76	00:25	0.4	24.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-07/01/76	00:25	-9.9	30.0	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/01/76	19:29	-0.7	23.5	290.	9.73	0.0	0.0	0.0	0.0	0.0
D-07/01/76	19:29	-9.9	33.5	-9999.	10.93	0.0	0.0	640.6	0.0	640.6
I-07/01/76	20:21	-0.8	25.0	-9999.	9.05	0.0	0.0	110.5	0.0	110.5
D-07/01/76	20:21	-9.9	31.0	-9999.	14.20	0.0	0.0	281.6	0.0	281.6
I-07/01/76	21:05	-0.8	25.5	-9999.	10.07	0.0	0.0	496.5	0.0	496.5
D-07/01/76	21:05	-9.9	34.0	-9999.	15.51	0.0	0.0	258.0	64.5	322.5
I-07/01/76	21:49	-0.5	25.0	-9999.	12.49	0.0	0.0	80.1	0.0	80.1
D-07/01/76	21:49	-9.9	33.0	-9999.	14.55	0.0	0.0	68.7	0.0	68.7
I-07/01/76	22:32	-0.3	24.5	-9999.	8.71	0.0	0.0	0.0	0.0	0.0
D-07/01/76	22:32	-9.9	32.5	-9999.	13.69	0.0	0.0	146.1	0.0	146.1
I-07/01/76	23:22	-0.1	24.0	-9999.	12.49	0.0	0.0	0.0	0.0	0.0
D-07/31/76	23:22	-9.9	30.0	-9999.	15.25	0.0	0.0	65.6	0.0	65.6
I-07/01/76	23:59	0.0	24.5	-9999.	10.07	0.0	0.0	0.0	0.0	0.0
D-07/01/76	23:59	-9.9	30.5	-9999.	15.25	0.0	0.0	0.0	0.0	0.0
I-07/02/76	00:42	0.2	24.5	205.	12.75	0.0	0.0	78.4	0.0	78.4
D-07/02/76	00:42	-9.9	31.0	-9999.	14.29	0.0	0.0	0.0	0.0	0.0
I-07/14/76	17:23	-0.6	27.5	-9999.	10.93	0.0	0.0	0.0	0.0	0.0
D-07/14/76	17:23	-9.6	35.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:14	-0.7	24.0	200.	12.58	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:14	-0.7	32.0	-9999.	13.51	0.0	0.0	0.0	0.0	0.0
I-07/14/76	18:58	-0.8	27.0	-9999.	8.97	0.0	0.0	0.0	0.0	0.0
D-07/14/76	18:58	-0.8	31.0	-9999.	12.82	0.0	0.0	0.0	0.0	0.0
I-07/14/76	19:46	-0.5	26.5	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	19:46	-9.5	28.5	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	20:56	-0.7	26.0	-9999.	11.45	0.0	0.0	0.0	0.0	0.0
D-07/14/76	20:56	-9.5	30.0	-9999.	12.48	0.0	0.0	0.0	0.0	0.0
I-07/14/76	21:37	-0.6	26.0	-9999.	9.05	0.0	0.0	0.0	0.0	0.0
D-07/14/76	21:37	-9.5	31.0	-9999.	13.17	0.0	0.0	0.0	0.0	0.0

I=INTAKE; D=DISCHARGE

3. Entrainment Abundance Raw Data Summaries

3.1 ROSETON GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (PUMP), 1976

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/30	06:35	1.3	129.71	6.5	172.	0.0	0.0	0.0	0.0	0.0
76/04/01	11:30	2.5	129.71	9.1	177.	0.0	0.0	0.0	0.0	0.0
76/04/01	14:35	2.3	129.71	8.4	174.	0.0	0.0	0.0	0.0	0.0
76/04/01	17:40	1.7	129.71	7.6	166.	0.0	0.0	0.0	0.0	0.0
76/04/01	20:45	1.8	129.71	7.9	158.	0.0	0.0	0.0	0.0	0.0
76/04/01	23:50	2.4	129.71	7.9	169.	0.0	0.0	0.0	0.0	0.0
76/04/02	03:00	2.3	129.71	7.0	137.	0.0	0.0	0.0	7.7	7.7
76/04/02	06:05	1.8	129.71	7.0	149.	0.0	0.0	0.0	0.0	0.0
76/04/08	11:47	1.5	129.71	7.0	117.	0.0	0.0	0.0	0.0	0.0
76/04/08	17:51	1.9	136.20	7.0	118.	0.0	0.0	0.0	0.0	0.0
76/04/09	03:10	1.5	159.25	7.0	106.	18.8	0.0	0.0	0.0	0.0
76/04/09	06:20	1.9	159.25	7.0	114.	0.0	0.0	0.0	0.0	0.0
76/04/15	08:25	1.4	129.71	9.0	110.	0.0	0.0	0.0	0.0	0.0
76/04/15	11:26	2.2	129.71	9.0	118.	0.0	0.0	0.0	0.0	0.0
76/04/15	17:28	1.1	129.71	9.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/15	20:35	1.6	129.71	8.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/15	23:40	2.3	145.16	8.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/16	02:43	2.0	129.71	8.0	94.	0.0	0.0	0.0	0.0	0.0
76/04/16	05:48	1.3	129.71	9.0	94.	0.0	0.0	0.0	7.7	7.7
76/04/19	08:40	1.3	145.16	9.0	125.	0.0	0.0	0.0	0.0	0.0
76/04/20	00:00	1.4	129.71	9.0	123.	7.7	0.0	0.0	0.0	0.0
76/04/20	03:05	2.0	129.71	9.0	121.	0.0	0.0	0.0	7.7	7.7
76/04/20	06:10	2.0	129.71	9.0	120.	0.0	0.0	0.0	0.0	0.0
76/04/22	09:55	1.5	159.25	10.5	132.	0.0	0.0	0.0	0.0	0.0
76/04/22	13:05	1.3	192.49	12.0	132.	0.0	0.0	0.0	0.0	0.0
76/04/22	16:13	1.7	192.49	12.0	138.	0.0	0.0	0.0	0.0	0.0
76/04/22	19:28	2.1	192.49	12.5	144.	0.0	0.0	0.0	0.0	0.0
76/04/22	22:30	1.7	159.25	11.0	141.	0.0	0.0	0.0	0.0	0.0
76/04/23	05:34	2.0	159.25	11.0	134.	6.3	0.0	0.0	0.0	0.0
76/04/23	08:45	2.0	145.16	11.5	150.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/29	08:25	1.4	159.25	13.0	132.	0.0	0.0	0.0	0.0	0.0
76/04/29	14:27	1.8	159.25	14.0	146.	6.3	0.0	0.0	0.0	0.0
76/04/29	17:28	1.2	159.25	14.0	155.	0.0	0.0	0.0	0.0	0.0
76/04/29	20:30	1.4	159.25	14.0	151.	0.0	0.0	0.0	0.0	0.0
76/04/29	23:32	2.0	159.25	14.0	149.	0.0	0.0	0.0	18.8	18.8
76/04/30	02:34	2.0	159.25	14.0	135.	6.3	0.0	0.0	0.0	0.0
76/04/30	05:37	1.5	159.25	14.0	130.	0.0	0.0	0.0	0.0	0.0
76/05/03	08:25	1.5	159.25	13.5	151.	6.3	0.0	0.0	0.0	0.0
76/05/03	11:40	1.5	151.00	13.5	149.	0.0	0.0	0.0	0.0	0.0
76/05/03	14:16	2.0	150.00	15.0	155.	0.0	6.7	0.0	0.0	6.7
76/05/03	16:47	1.9	152.00	14.0	152.	19.7	0.0	26.3	0.0	26.3
76/05/03	19:30	1.4	150.00	14.0	151.	13.3	0.0	6.7	0.0	6.7
76/05/03	22:15	1.2	150.00	13.0	131.	13.3	13.3	0.0	0.0	13.3
76/05/04	00:59	1.9	150.00	13.0	128.	0.0	80.0	13.3	0.0	93.3
76/05/04	03:32	2.0	150.00	13.0	129.	0.0	0.0	46.7	0.0	46.7
76/05/04	06:10	1.6	150.00	13.0	129.	13.3	0.0	0.0	0.0	0.0
76/05/05	08:30	1.4	150.00	13.0	153.	33.3	0.0	0.0	0.0	0.0
76/05/05	11:14	1.2	150.00	13.0	158.	0.0	0.0	0.0	0.0	0.0
76/05/05	14:00	1.6	150.00	14.0	165.	53.3	0.0	0.0	0.0	0.0
76/05/05	16:44	1.7	150.00	15.0	165.	20.0	0.0	0.0	0.0	0.0
76/05/05	19:23	1.8	152.00	14.0	158.	6.6	0.0	0.0	0.0	0.0
76/05/05	22:21	1.4	150.00	13.0	159.	33.3	0.0	0.0	0.0	0.0
76/05/06	01:10	1.5	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/06	03:48	2.0	150.00	13.0	138.	0.0	0.0	0.0	0.0	0.0
76/05/06	06:25	2.0	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/07	08:15	1.6	150.00	13.0	174.	6.7	0.0	0.0	0.0	0.0
76/05/07	11:00	1.3	150.00	13.0	174.	26.7	0.0	0.0	0.0	0.0
76/05/07	13:45	1.1	150.00	13.0	175.	13.3	0.0	0.0	0.0	0.0
76/05/07	16:16	1.4	150.00	14.0	178.	13.3	0.0	20.0	0.0	20.0
76/05/07	18:56	2.0	150.00	14.0	185.	13.3	0.0	13.3	0.0	13.3

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	26.7	6.7	6.7	0.0	13.4
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	40.0	0.0	40.0
76/05/10	11:00	1.9	150.00	14.0	167.	13.3	0.0	53.3	0.0	53.3
76/05/10	13:50	1.3	150.00	14.0	164.	40.0	0.0	0.0	0.0	0.0
76/05/10	17:15	1.2	150.00	13.0	147.	53.3	6.7	6.7	0.0	13.4
76/05/10	20:55	2.2	150.00	13.0	152.	20.0	0.0	13.3	0.0	13.3
76/05/10	23:46	2.1	150.00	14.0	146.	66.7	6.7	6.7	0.0	13.4
76/05/11	02:50	1.4	150.00	13.5	129.	106.7	0.0	0.0	0.0	0.0
76/05/11	05:30	1.2	150.00	13.0	126.	26.7	20.0	6.7	0.0	26.7
76/05/12	11:30	2.1	150.00	14.0	147.	20.0	0.0	46.7	0.0	46.7
76/05/12	14:05	1.5	150.00	14.0	146.	40.0	33.3	13.3	0.0	46.6
76/05/12	17:00	1.2	150.00	14.0	146.	73.3	0.0	26.7	0.0	26.7
76/05/12	19:48	1.5	150.00	14.0	143.	106.7	6.7	33.3	0.0	40.0
76/05/12	22:30	2.1	150.00	14.0	149.	26.7	20.0	6.7	0.0	26.7
76/05/13	01:22	1.9	90.00	14.0	135.	33.3	22.2	33.3	0.0	55.5
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	13.3	113.3	0.0	126.6
76/05/14	11:20	1.9	150.00	15.0	143.	100.0	0.0	26.7	0.0	26.7
76/05/14	14:10	2.0	150.00	15.0	141.	113.3	0.0	6.7	0.0	6.7
76/05/14	17:00	1.4	150.00	15.0	142.	106.7	0.0	6.7	0.0	6.7
76/05/14	19:50	1.0	150.00	15.0	142.	53.3	0.0	26.7	0.0	26.7
76/05/14	22:45	2.0	150.00	15.0	142.	66.7	0.0	0.0	0.0	0.0
76/05/15	01:40	2.4	150.00	14.5	131.	66.7	0.0	0.0	0.0	0.0
76/05/15	04:10	1.9	155.00	15.0	132.	212.9	0.0	0.0	0.0	0.0
76/05/15	07:10	1.3	150.00	14.5	131.	46.7	6.7	0.0	0.0	6.7
76/05/17	08:33	1.4	150.00	15.0	145.	260.0	13.3	0.0	0.0	13.3
76/05/17	11:16	1.3	150.00	15.0	149.	146.7	0.0	0.0	0.0	0.0
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/17	16:30	2.2	150.00	17.0	153.	73.3	20.0	26.7	0.0	46.7

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	180.0	6.7	6.7	0.0	13.4
76/05/17	22:12	1.3	150.00	16.0	150.	60.0	13.3	6.7	0.0	20.0
76/05/18	00:55	1.9	150.00	15.5	138.	280.0	33.3	20.0	0.0	53.3
76/05/18	03:40	2.4	150.00	16.0	137.	60.0	6.7	40.0	0.0	46.7
76/05/18	06:29	2.0	150.00	16.0	140.	433.3	20.0	0.0	0.0	20.0
76/05/19	08:40	1.5	150.00	15.0	148.	220.0	0.0	13.3	0.0	13.3
76/05/19	11:25	1.2	150.00	15.0	152.	113.3	0.0	33.3	0.0	33.3
76/05/19	14:28	1.3	150.00	15.0	156.	26.7	0.0	46.7	0.0	46.7
76/05/19	17:23	1.8	150.00	15.0	154.	26.7	0.0	0.0	0.0	0.0
76/05/19	20:23	1.5	150.00	16.0	160.	46.7	0.0	0.0	0.0	0.0
76/05/19	23:36	1.2	150.00	15.0	153.	33.3	6.7	6.7	0.0	13.4
76/05/20	02:28	1.5	150.00	15.0	141.	6.7	26.7	113.3	0.0	140.0
76/05/20	05:13	1.8	150.00	15.0	145.	33.3	13.3	233.3	0.0	246.6
76/05/21	08:20	2.1	150.00	15.0	147.	33.3	0.0	93.3	0.0	93.3
76/05/21	11:20	1.6	150.00	16.0	152.	160.0	0.0	0.0	0.0	0.0
76/05/21	14:17	1.4	150.00	16.0	164.	20.0	6.7	46.7	0.0	53.4
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	26.7	80.0	0.0	106.7
76/05/21	20:00	2.6	150.00	15.0	152.	13.3	0.0	0.0	0.0	0.0
76/05/21	23:00	1.7	150.00	15.0	149.	53.3	13.3	53.3	0.0	66.6
76/05/22	01:50	1.5	150.00	15.0	132.	13.3	26.7	26.7	0.0	53.4
76/05/22	04:37	1.7	150.00	15.0	128.	33.3	6.7	120.0	0.0	126.7
76/05/24	08:10	1.8	150.00	14.0	150.	40.0	20.0	13.3	0.0	33.3
76/05/24	10:42	1.8	150.00	15.0	151.	40.0	0.0	0.0	0.0	0.0
76/05/24	13:20	1.5	150.00	15.0	152.	73.3	0.0	0.0	0.0	0.0
76/05/24	16:05	1.3	153.00	14.0	150.	26.1	0.0	6.5	0.0	6.5
76/05/24	19:10	1.9	155.00	14.0	148.	58.1	0.0	0.0	0.0	0.0
76/05/24	21:48	2.2	150.00	15.0	151.	20.0	0.0	0.0	0.0	0.0
76/05/25	01:05	1.8	150.00	14.0	136.	33.3	0.0	0.0	0.0	0.0
76/05/25	04:05	1.4	150.00	14.0	132.	60.0	0.0	6.7	0.0	6.7
76/05/26	08:04	1.8	150.00	14.0	140.	26.7	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	60.0	0.0	0.0	0.0	0.0
76/05/26	13:34	1.8	151.00	14.0	141.	66.2	0.0	6.6	0.0	6.6
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	0.0	0.0	0.0	0.0
76/05/26	19:50	1.7	100.00	14.0	133.	70.0	0.0	0.0	0.0	0.0
76/05/26	21:40	2.3	150.00	14.0	135.	6.7	0.0	0.0	0.0	0.0
76/05/27	02:10	1.8	150.00	14.0	124.	53.3	0.0	6.7	0.0	6.7
76/05/27	05:00	1.3	150.00	13.0	123.	40.0	0.0	6.7	0.0	6.7
76/05/28	08:06	1.5	150.00	14.0	160.	26.7	0.0	0.0	0.0	0.0
76/05/28	10:50	1.8	150.00	14.0	170.	20.0	0.0	0.0	0.0	0.0
76/05/28	13:45	1.8	150.00	14.0	158.	73.3	0.0	0.0	0.0	0.0
76/05/28	16:45	1.2	150.00	14.5	162.	106.7	0.0	0.0	0.0	0.0
76/05/28	19:53	1.4	156.00	14.8	155.	185.9	0.0	12.8	0.0	12.8
76/05/28	23:08	2.2	150.00	14.0	150.	40.0	0.0	0.0	0.0	0.0
76/05/29	01:57	2.1	150.00	14.0	155.	126.7	0.0	6.7	0.0	6.7
76/05/29	04:55	1.5	150.00	14.0	165.	193.3	0.0	0.0	0.0	0.0
76/06/01	03:10	2.3	150.00	14.0	140.	106.7	0.0	20.0	0.0	20.0
76/06/01	06:20	1.6	150.00	14.0	150.	300.0	0.0	13.3	0.0	13.3
76/06/01	09:35	1.3	150.00	15.0	153.	146.7	0.0	13.3	0.0	13.3
76/06/01	12:18	1.7	150.00	15.0	171.	133.3	0.0	0.0	0.0	0.0
76/06/01	15:04	2.1	149.00	15.0	178.	40.3	0.0	20.1	0.0	20.1
76/06/01	22:25	1.3	159.00	15.0	246.	62.9	0.0	0.0	0.0	0.0
76/06/02	08:08	1.4	150.00	15.0	-9999.	173.3	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	33.3	0.0	6.7	0.0	6.7
76/06/02	13:23	1.9	150.00	15.0	173.	180.0	0.0	20.0	0.0	20.0
76/06/02	17:15	2.1	150.00	15.0	169.	186.7	0.0	26.7	0.0	26.7
76/06/02	20:04	1.6	150.00	15.0	155.	413.3	0.0	13.3	0.0	13.3
76/06/03	00:25	1.9	150.00	15.0	144.	133.3	0.0	0.0	0.0	0.0
76/06/03	03:15	2.3	150.00	14.0	141.	120.0	0.0	40.0	0.0	40.0
76/06/03	06:00	2.0	150.00	15.0	144.	300.0	0.0	33.3	0.0	33.3
76/06/04	08:53	1.5	150.00	15.0	155.	386.7	0.0	13.3	0.0	13.3

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	146.7	0.0	33.3	0.0	33.3
76/06/04	14:15	1.5	151.00	16.0	154.	178.8	0.0	0.0	0.0	0.0
76/06/04	17:50	2.0	150.00	16.5	160.	173.3	6.7	13.3	0.0	20.0
76/06/04	19:58	1.7	151.00	16.0	150.	298.0	0.0	33.1	0.0	33.1
76/06/04	22:12	1.3	150.00	16.0	149.	506.7	0.0	73.3	0.0	73.3
76/06/05	01:00	1.3	150.00	16.0	140.	20.0	0.0	26.7	0.0	26.7
76/06/05	03:50	1.9	150.00	16.0	137.	180.0	0.0	33.3	0.0	33.3
76/06/07	08:15	2.0	150.00	16.0	154.	53.3	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	126.7	0.0	20.0	0.0	20.0
76/06/07	13:20	1.0	150.00	17.0	163.	13.3	0.0	6.7	0.0	6.7
76/06/07	15:55	1.0	148.00	17.0	161.	40.5	0.0	74.3	0.0	74.3
76/06/07	18:35	1.8	150.00	17.5	162.	126.7	0.0	66.7	0.0	66.7
76/06/07	21:05	2.0	150.00	17.0	155.	46.7	0.0	0.0	0.0	0.0
76/06/07	23:55	1.4	150.00	18.0	145.	306.7	0.0	26.7	0.0	26.7
76/06/08	02:40	1.2	150.00	17.0	137.	46.7	6.7	46.7	0.0	53.4
76/06/08	05:25	1.5	150.00	17.0	136.	86.7	0.0	46.7	0.0	46.7
76/06/09	08:12	1.9	150.00	17.0	158.	73.3	0.0	33.3	0.0	33.3
76/06/09	10:56	2.0	150.00	18.0	164.	120.0	0.0	13.3	0.0	13.3
76/06/09	13:48	1.4	127.00	18.0	161.	189.0	0.0	55.1	0.0	55.1
76/06/09	17:25	1.1	150.00	18.0	157.	46.7	0.0	13.3	0.0	13.3
76/06/09	20:05	2.1	155.00	18.0	160.	96.8	0.0	12.9	0.0	12.9
76/06/09	23:00	2.3	150.00	18.5	164.	20.0	6.7	0.0	0.0	6.7
76/06/10	02:45	1.7	150.00	18.0	147.	226.7	0.0	13.3	0.0	13.3
76/06/10	04:30	1.3	150.00	18.0	141.	33.3	0.0	6.7	0.0	6.7
76/06/11	08:10	1.4	150.00	18.0	150.	113.3	0.0	0.0	0.0	0.0
76/06/11	10:49	2.1	150.00	19.0	150.	46.7	0.0	33.3	0.0	33.3
76/06/11	13:32	1.8	150.00	19.0	150.	146.7	0.0	13.3	0.0	13.3
76/06/11	16:11	1.3	150.00	19.0	150.	133.3	0.0	126.7	0.0	126.7
76/06/11	19:20	1.3	150.00	19.0	150.	106.7	0.0	53.3	0.0	53.3
76/06/11	22:58	2.0	150.00	18.5	150.	73.3	0.0	6.7	0.0	6.7

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	20.0	0.0	113.3	0.0	113.3
76/06/12	03:45	1.8	150.00	19.0	150.	193.3	0.0	20.0	0.0	20.0
76/06/14	08:15	1.3	150.00	19.0	150.	33.3	0.0	106.7	0.0	106.7
76/06/14	10:59	1.5	150.00	19.0	150.	20.0	0.0	106.7	0.0	106.7
76/06/14	13:39	2.0	150.00	19.0	150.	46.7	0.0	126.7	0.0	126.7
76/06/14	17:35	1.9	150.00	20.0	157.	93.3	0.0	73.3	0.0	73.3
76/06/14	20:56	1.3	150.00	20.0	156.	80.0	0.0	113.3	0.0	113.3
76/06/14	23:48	1.8	150.00	20.0	148.	193.3	0.0	133.3	0.0	133.3
76/06/15	02:30	2.2	150.00	20.0	143.	26.7	0.0	13.3	0.0	13.3
76/06/15	05:15	1.8	150.00	20.0	144.	146.7	0.0	93.3	0.0	93.3
76/06/16	08:10	1.3	150.00	20.0	166.	106.7	0.0	66.7	0.0	66.7
76/06/16	10:52	1.2	150.00	20.0	171.	53.3	0.0	73.3	0.0	73.3
76/06/16	13:38	1.8	150.00	22.0	175.	133.3	0.0	53.3	0.0	53.3
76/06/16	16:20	2.0	150.00	23.0	178.	0.0	0.0	80.0	0.0	80.0
76/06/16	19:03	1.8	150.00	21.0	174.	0.0	0.0	80.0	0.0	80.0
76/06/16	23:10	1.4	150.00	21.0	165.	46.7	0.0	13.3	0.0	13.3
76/06/17	02:05	2.0	150.00	21.0	168.	93.3	0.0	333.3	0.0	333.3
76/06/17	04:55	2.1	150.00	21.0	206.	26.7	0.0	26.7	0.0	26.7
76/06/18	08:20	1.5	150.00	21.0	150.	153.3	0.0	46.7	0.0	46.7
76/06/18	11:09	1.1	150.00	21.0	150.	26.7	0.0	20.0	0.0	20.0
76/06/18	13:51	1.4	151.00	21.0	150.	33.1	0.0	145.7	0.0	145.7
76/06/18	16:40	1.9	152.00	22.0	150.	65.8	0.0	78.9	0.0	78.9
76/06/18	22:25	1.4	150.00	22.0	150.	93.3	0.0	106.7	0.0	106.7
76/06/19	01:15	1.4	150.00	22.0	150.	53.3	0.0	160.0	0.0	160.0
76/06/19	04:10	1.9	150.00	22.0	150.	26.7	0.0	133.3	0.0	133.3
76/06/21	08:15	1.8	150.00	23.0	155.	6.7	0.0	126.7	0.0	126.7
76/06/21	11:01	1.5	150.00	22.0	155.	13.3	0.0	133.3	0.0	133.3
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	12.0	0.0	12.0
76/06/21	16:50	1.5	157.00	23.0	182.	12.7	0.0	51.0	0.0	51.0
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	0.0	66.7	0.0	66.7

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	20.0	0.0	20.0
76/06/22	01:20	1.5	150.00	22.0	164.	13.3	0.0	93.3	0.0	93.3
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	240.0	0.0	240.0
76/06/23	08:15	1.8	150.00	23.0	180.	6.7	0.0	246.7	0.0	246.7
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	213.3	0.0	213.3
76/06/23	13:46	1.3	150.00	23.0	174.	6.7	0.0	146.7	0.0	146.7
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	81.2	0.0	81.2
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	0.0	602.5	0.0	602.5
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	780.0	0.0	780.0
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	0.0	400.0	0.0	400.0
76/06/25	08:20	1.6	150.00	24.0	160.	0.0	0.0	146.7	0.0	146.7
76/06/25	11:11	1.9	150.00	24.0	160.	0.0	0.0	166.7	0.0	166.7
76/06/25	13:51	1.6	150.00	24.0	160.	6.7	0.0	306.7	0.0	306.7
76/06/25	16:45	1.3	154.00	24.0	188.	13.0	0.0	324.7	0.0	324.7
76/06/25	22:20	2.2	150.00	24.0	185.	0.0	0.0	580.0	0.0	580.0
76/06/26	01:30	2.0	150.00	24.0	168.	6.7	0.0	373.3	0.0	373.3
76/06/26	04:23	1.5	150.00	24.0	170.	13.3	0.0	366.7	0.0	366.7
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	100.0	0.0	100.0
76/06/28	20:55	1.3	150.00	25.0	147.	13.3	0.0	180.0	0.0	180.0
76/06/28	23:45	2.2	150.00	25.0	194.	6.7	0.0	66.7	0.0	66.7
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	0.0	53.3	0.0	53.3
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	46.7	0.0	46.7
76/06/30	11:11	1.7	150.00	26.0	227.	13.3	0.0	46.7	0.0	46.7
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	13.3	0.0	13.3
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	0.0	6.2	0.0	6.2
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	0.0	46.7	0.0	46.7
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	41.7	0.0	41.7
76/07/01	05:23	2.1	150.00	25.0	-9999.	0.0	0.0	340.0	0.0	340.0
76/07/02	08:20	1.5	150.00	25.0	229.	13.3	0.0	13.3	0.0	13.3

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	60.0	0.0	60.0
76/07/02	13:51	2.0	159.00	26.0	237.	6.3	0.0	31.4	0.0	31.4
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	127.5	0.0	127.5
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	60.0	0.0	60.0
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	88.1	0.0	88.1
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	100.0	0.0	100.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	20.0	0.0	20.0
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	0.0	0.0	0.0
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	6.7	0.0	6.7
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	6.7	0.0	6.7
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	21.4	10.7	32.1
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	20.0	0.0	20.0
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	53.3	53.3	106.6
76/07/08	02:30	1.5	150.00	24.0	214.	0.0	0.0	0.0	20.0	20.0
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	13.3	0.0	13.3
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	6.7	0.0	6.7
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	0.0	6.7	6.7
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	13.3	6.7	20.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	0.0	31.8	31.8
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	0.0	26.7	26.7
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	0.0	6.7	6.7
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	0.0	6.7	6.7
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	6.7	60.0	66.7
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	0.0	60.0	60.0
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	13.3	20.0	33.3
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	6.7	6.7
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/14	11:11	1.6	150.00	25.0	218.	0.0	0.0	13.3	6.7	20.0
76/07/14	13:53	2.1	151.00	25.0	214.	0.0	0.0	0.0	26.5	26.5
76/07/14	16:45	2.0	159.00	25.0	227.	0.0	0.0	6.3	0.0	6.3
76/07/14	20:12	1.3	156.00	25.0	221.	0.0	0.0	6.4	12.8	19.2
76/07/14	23:30	1.8	150.00	25.0	213.	0.0	0.0	0.0	20.0	20.0
76/07/15	02:30	2.3	150.00	25.0	203.	0.0	0.0	6.7	0.0	6.7
76/07/15	05:25	1.8	150.00	25.0	125.	0.0	0.0	6.7	6.7	13.4
76/07/16	08:20	1.4	150.00	25.0	225.	0.0	0.0	0.0	0.0	0.0
76/07/16	11:08	1.3	150.00	25.0	220.	0.0	0.0	0.0	13.3	13.3
76/07/16	13:46	1.9	150.00	25.0	222.	0.0	0.0	0.0	0.0	0.0
76/07/16	16:45	2.2	150.00	25.0	227.	0.0	0.0	0.0	13.3	13.3
76/07/16	19:27	1.9	150.00	25.0	220.	0.0	0.0	0.0	13.3	13.3
76/07/16	22:25	1.4	150.00	25.0	216.	0.0	0.0	0.0	13.3	13.3
76/07/17	01:20	1.8	150.00	25.0	194.	0.0	0.0	0.0	40.0	40.0
76/07/17	04:26	2.1	150.00	25.0	200.	0.0	0.0	0.0	20.0	20.0
76/07/19	08:20	1.5	150.00	25.0	220.	0.0	0.0	0.0	20.0	20.0
76/07/19	11:10	1.1	150.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	14:01	1.2	152.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/19	16:55	1.8	220.00	25.0	215.	0.0	0.0	4.5	9.1	13.6
76/07/19	20:40	1.9	150.00	25.0	217.	0.0	0.0	6.7	33.3	40.0
76/07/19	23:35	1.4	150.00	25.0	210.	0.0	0.0	0.0	46.7	46.7
76/07/20	02:45	1.3	150.00	25.0	194.	0.0	0.0	6.7	80.0	86.7
76/07/20	06:00	2.8	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/21	08:12	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/21	11:05	1.5	150.00	25.0	219.	0.0	0.0	0.0	0.0	0.0
76/07/21	13:50	1.1	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	16:35	1.5	150.00	25.0	218.	0.0	0.0	0.0	6.7	6.7
76/07/21	19:34	2.0	150.00	25.0	228.	0.0	0.0	0.0	13.3	13.3
76/07/21	22:20	1.9	150.00	25.0	222.	0.0	0.0	0.0	60.0	60.0
76/07/22	01:20	1.4	150.00	25.0	226.	0.0	0.0	0.0	20.0	20.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/22	04:20	1.2	150.00	25.0	125.	0.0	0.0	0.0	13.3	13.3
76/07/23	09:20	1.8	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/23	11:08	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/23	13:51	1.3	150.00	25.0	181.	0.0	0.0	0.0	0.0	0.0
76/07/23	17:45	1.4	150.00	25.0	178.	0.0	0.0	0.0	0.0	0.0
76/07/23	19:50	1.9	150.00	25.0	183.	0.0	0.0	0.0	0.0	0.0
76/07/23	22:40	2.3	150.00	25.0	185.	0.0	0.0	0.0	6.7	6.7
76/07/24	05:00	1.3	150.00	25.0	195.	0.0	0.0	0.0	13.3	13.3
76/07/26	08:20	1.4	150.00	25.0	203.	0.0	0.0	0.0	6.7	6.7
76/07/26	11:08	2.0	150.00	25.0	208.	0.0	0.0	0.0	0.0	0.0
76/07/26	13:52	1.8	150.00	25.0	209.	0.0	0.0	0.0	0.0	0.0
76/07/26	16:45	1.6	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/26	19:50	1.4	150.00	25.0	201.	0.0	0.0	0.0	20.0	20.0
76/07/26	22:40	2.2	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	00:05	2.3	150.00	25.0	207.	0.0	0.0	0.0	26.7	26.7
76/07/27	04:10	1.6	150.00	25.0	165.	0.0	0.0	0.0	0.0	0.0
76/07/27	07:11	1.2	150.00	25.0	160.	0.0	0.0	0.0	0.0	0.0
76/07/28	08:20	1.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	11:06	2.0	150.00	25.0	199.	0.0	0.0	0.0	0.0	0.0
76/07/28	13:46	2.2	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/28	16:30	1.6	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/28	19:30	1.2	160.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	22:35	1.9	150.00	25.0	204.	0.0	0.0	0.0	0.0	0.0
76/07/29	01:30	2.3	150.00	25.0	204.	0.0	0.0	0.0	0.0	0.0
76/07/29	04:20	2.2	150.00	25.0	159.	0.0	0.0	0.0	0.0	0.0
76/07/29	07:06	1.4	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/30	08:20	1.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	11:13	1.5	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	13:53	2.2	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	17:50	2.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/30	19:40	1.5	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	22:35	1.4	150.00	25.0	180.	0.0	0.0	0.0	13.3	13.3
76/07/31	01:20	2.1	150.00	25.0	180.	0.0	0.0	0.0	20.0	20.0
76/07/31	03:55	2.3	150.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/08/03	08:12	1.8	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:00	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	13:45	1.1	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	16:40	1.9	150.00	25.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/03	19:40	2.2	150.00	25.0	190.	0.0	0.0	0.0	6.7	6.7
76/08/03	22:10	1.7	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:20	1.3	150.00	25.0	170.	0.0	0.0	0.0	0.0	0.0
76/08/04	04:15	1.5	150.00	25.0	180.	0.0	0.0	0.0	6.7	6.7
76/08/04	06:51	2.0	150.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/08/05	08:05	2.0	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	10:55	1.8	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	13:50	1.2	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:40	1.5	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	19:25	2.1	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	22:10	2.3	150.00	26.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/05	00:55	1.8	150.00	25.0	240.	0.0	0.0	0.0	13.3	13.3
76/08/06	03:21	1.4	150.00	25.0	240.	0.0	0.0	0.0	20.0	20.0
76/08/06	06:02	1.7	150.00	25.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/10	08:20	1.3	150.00	24.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/10	11:13	2.1	150.00	24.0	260.	0.0	0.0	0.0	6.7	6.7
76/08/10	14:08	1.9	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	17:05	1.4	150.00	23.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	19:52	1.2	160.00	23.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	22:57	2.0	170.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/11	02:05	2.3	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/11	05:00	1.7	150.00	23.5	240.	0.0	0.0	0.0	13.3	13.3

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/11	07:45	-0.9	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	08:20	1.3	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	11:07	1.8	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	13:48	2.1	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	16:41	1.8	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	19:35	1.3	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	22:30	1.6	150.00	23.5	250.	0.0	0.0	0.0	6.7	6.7
76/08/13	00:10	1.6	150.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/13	03:45	-0.9	150.00	23.5	230.	0.0	0.0	0.0	0.0	0.0
76/08/13	06:50	1.6	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	08:20	1.4	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	11:18	1.1	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	14:00	1.6	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	16:42	1.9	150.00	24.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:35	1.9	150.00	24.0	250.	0.0	0.0	0.0	6.7	6.7
76/08/17	22:20	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/18	00:35	1.1	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/18	03:08	1.7	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:20	1.7	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	08:20	1.9	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/19	11:15	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	14:03	1.4	151.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	16:35	1.9	152.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	19:27	2.2	152.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/19	22:20	2.0	159.00	23.5	250.	0.0	0.0	0.0	6.3	6.3
76/08/20	01:16	1.6	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/20	04:10	1.5	150.00	23.0	230.	0.0	0.0	0.0	6.7	6.7
76/08/20	06:55	1.9	150.00	23.0	230.	0.0	0.0	0.0	0.0	0.0
76/08/24	08:20	1.5	150.00	22.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/24	11:02	2.0	150.00	22.0	260.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/17	22:12	1.3	150.00	16.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/18	00:55	1.9	150.00	15.5	138.	0.0	6.7	0.0	0.0	6.7
76/05/18	03:40	2.4	150.00	16.0	137.	0.0	0.0	0.0	0.0	0.0
76/05/18	06:29	2.0	150.00	16.0	140.	0.0	0.0	0.0	0.0	0.0
76/05/19	08:40	1.5	150.00	15.0	148.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:25	1.2	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/19	14:28	1.3	150.00	15.0	156.	0.0	0.0	0.0	0.0	0.0
76/05/19	17:23	1.8	150.00	15.0	154.	0.0	0.0	0.0	0.0	0.0
76/05/19	20:23	1.5	150.00	16.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/19	23:36	1.2	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/05/20	02:28	1.5	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/20	05:13	1.8	150.00	15.0	145.	0.0	0.0	0.0	0.0	0.0
76/05/21	08:20	2.1	150.00	15.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/21	11:20	1.6	150.00	16.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/21	14:17	1.4	150.00	16.0	164.	0.0	0.0	0.0	0.0	0.0
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	6.7	0.0	0.0	6.7
76/05/21	20:00	2.6	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/21	23:00	1.7	150.00	15.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/22	01:50	1.5	150.00	15.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/22	04:37	1.7	150.00	15.0	128.	0.0	0.0	0.0	0.0	0.0
76/05/24	08:10	1.8	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/24	10:42	1.8	150.00	15.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/24	13:20	1.5	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/24	16:05	1.3	153.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/24	19:10	1.9	155.00	14.0	148.	0.0	0.0	0.0	0.0	0.0
76/05/24	21:48	2.2	150.00	15.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/25	01:05	1.8	150.00	14.0	136.	0.0	0.0	0.0	0.0	0.0
76/05/25	04:05	1.4	150.00	14.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/26	08:04	1.8	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY (NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	0.0	0.0	0.0	0.0	0.0
76/05/26	13:34	1.8	151.00	14.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	0.0	0.0	0.0	0.0
76/05/26	19:50	1.7	100.00	14.0	133.	0.0	0.0	0.0	0.0	0.0
76/05/26	21:40	2.3	150.00	14.0	135.	0.0	0.0	13.3	0.0	13.3
76/05/27	02:10	1.8	150.00	14.0	124.	0.0	0.0	0.0	0.0	0.0
76/05/27	05:00	1.3	150.00	13.0	123.	0.0	0.0	0.0	0.0	0.0
76/05/28	08:06	1.5	150.00	14.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/28	10:50	1.8	150.00	14.0	170.	0.0	0.0	0.0	0.0	0.0
76/05/28	13:45	1.8	150.00	14.0	158.	0.0	0.0	0.0	0.0	0.0
76/05/28	16:45	1.2	150.00	14.5	162.	0.0	0.0	0.0	0.0	0.0
76/05/28	19:53	1.4	156.00	14.8	155.	0.0	0.0	0.0	0.0	0.0
76/05/28	23:08	2.2	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/29	01:57	2.1	150.00	14.0	155.	0.0	0.0	0.0	0.0	0.0
76/05/29	04:55	1.5	150.00	14.0	165.	0.0	0.0	0.0	0.0	0.0
76/06/01	03:10	2.3	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0
76/06/01	06:20	1.6	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/01	09:35	1.3	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/06/01	12:18	1.7	150.00	15.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/01	15:04	2.1	149.00	15.0	178.	13.4	0.0	0.0	0.0	0.0
76/06/01	22:25	1.3	159.00	15.0	246.	0.0	0.0	0.0	0.0	0.0
76/06/02	08:08	1.4	150.00	15.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/02	13:23	1.9	150.00	15.0	173.	0.0	0.0	0.0	0.0	0.0
76/06/02	17:15	2.1	150.00	15.0	169.	0.0	0.0	6.7	0.0	6.7
76/06/02	20:04	1.6	150.00	15.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/03	00:25	1.9	150.00	15.0	144.	0.0	0.0	0.0	0.0	0.0
76/06/03	03:15	2.3	150.00	15.0	141.	0.0	0.0	40.0	0.0	40.0
76/06/03	06:00	2.0	150.00	15.0	144.	0.0	0.0	6.7	0.0	6.7
76/06/04	08:53	1.5	150.00	15.0	155.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/04	14:15	1.5	151.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/04	17:50	2.0	150.00	16.5	160.	0.0	0.0	0.0	0.0	0.0
76/06/04	19:58	1.7	151.00	16.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/04	22:12	1.3	150.00	16.0	149.	0.0	0.0	0.0	0.0	0.0
76/06/05	01:00	1.3	150.00	16.0	140.	0.0	0.0	0.0	0.0	0.0
76/06/05	03:50	1.9	150.00	16.0	137.	0.0	0.0	0.0	0.0	0.0
76/06/07	08:15	2.0	150.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	0.0	0.0	0.0	0.0	0.0
76/06/07	13:20	1.0	150.00	17.0	163.	0.0	0.0	0.0	0.0	0.0
76/06/07	15:55	1.0	148.00	17.0	161.	0.0	0.0	0.0	0.0	0.0
76/06/07	18:35	1.8	150.00	17.5	162.	0.0	0.0	0.0	0.0	0.0
76/06/07	21:05	2.0	150.00	17.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/07	23:55	1.4	150.00	18.0	145.	0.0	0.0	0.0	0.0	0.0
76/06/08	02:40	1.2	150.00	17.0	137.	0.0	0.0	0.0	0.0	0.0
76/06/08	05:25	1.5	150.00	17.0	136.	0.0	0.0	0.0	0.0	0.0
76/06/09	08:12	1.9	150.00	17.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/09	10:56	2.0	150.00	18.0	164.	0.0	0.0	0.0	0.0	0.0
76/06/09	13:48	1.4	127.00	18.0	161.	0.0	0.0	7.9	0.0	7.9
76/06/09	17:25	1.1	150.00	18.0	157.	0.0	0.0	6.7	0.0	6.7
76/06/09	20:05	2.1	155.00	18.0	160.	0.0	0.0	12.9	0.0	12.9
76/06/09	23:00	2.3	150.00	18.5	164.	0.0	0.0	0.0	0.0	0.0
76/06/10	02:45	1.7	150.00	18.0	147.	0.0	6.7	0.0	0.0	6.7
76/06/10	04:30	1.3	150.00	18.0	141.	0.0	0.0	0.0	0.0	0.0
76/06/11	08:10	1.4	150.00	18.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	10:49	2.1	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	13:32	1.8	150.00	19.0	150.	0.0	0.0	13.3	0.0	13.3
76/06/11	16:11	1.3	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/11	19:20	1.3	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/11	22:58	2.0	150.00	18.5	150.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/12	03:45	1.8	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/14	08:15	1.3	150.00	19.0	150.	0.0	0.0	33.3	0.0	33.3
76/06/14	10:59	1.5	150.00	19.0	150.	0.0	0.0	13.3	0.0	13.3
76/06/14	13:39	2.0	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/14	17:35	1.9	150.00	20.0	157.	0.0	0.0	0.0	0.0	0.0
76/06/14	20:56	1.3	150.00	20.0	156.	0.0	0.0	33.3	0.0	33.3
76/06/14	23:48	1.8	150.00	20.0	148.	0.0	13.3	26.7	0.0	40.0
76/06/15	02:30	2.2	150.00	20.0	143.	0.0	0.0	20.0	0.0	20.0
76/06/15	05:15	1.8	150.00	20.0	144.	0.0	0.0	13.3	0.0	13.3
76/06/16	08:10	1.3	150.00	20.0	166.	0.0	0.0	13.3	0.0	13.3
76/06/16	10:52	1.2	150.00	20.0	171.	0.0	0.0	6.7	0.0	6.7
76/06/16	13:38	1.8	150.00	22.0	175.	0.0	0.0	0.0	0.0	0.0
76/06/16	16:20	2.0	150.00	23.0	178.	0.0	0.0	26.7	0.0	26.7
76/06/16	19:03	1.8	150.00	21.0	174.	0.0	0.0	40.0	0.0	40.0
76/06/16	23:10	1.4	150.00	21.0	165.	0.0	0.0	0.0	0.0	0.0
76/06/17	02:05	2.0	150.00	21.0	168.	0.0	0.0	26.7	0.0	26.7
76/06/17	04:55	2.1	150.00	21.0	206.	0.0	0.0	26.7	0.0	26.7
76/06/18	08:20	1.5	150.00	21.0	150.	0.0	0.0	33.3	0.0	33.3
76/06/18	11:09	1.1	150.00	21.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/18	13:51	1.4	151.00	21.0	150.	0.0	0.0	6.6	0.0	6.6
76/06/18	16:40	1.9	152.00	22.0	150.	0.0	6.6	85.5	0.0	92.1
76/06/18	22:25	1.4	150.00	22.0	150.	0.0	0.0	126.7	0.0	126.7
76/06/19	01:15	1.4	150.00	22.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/19	04:10	1.9	150.00	22.0	150.	0.0	0.0	60.0	0.0	60.0
76/06/21	08:15	1.8	150.00	23.0	155.	0.0	0.0	213.3	0.0	213.3
76/06/21	11:01	1.5	150.00	22.0	155.	0.0	0.0	80.0	0.0	80.0
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	47.9	0.0	47.9
76/06/21	16:50	1.5	157.00	23.0	182.	0.0	0.0	38.2	0.0	38.2
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	0.0	46.7	0.0	46.7

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	0.0	0.0	0.0
76/06/22	01:20	1.5	150.00	22.0	164.	0.0	0.0	40.0	0.0	40.0
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	200.0	0.0	200.0
76/06/23	08:15	1.8	150.00	23.0	180.	0.0	0.0	120.0	0.0	120.0
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	26.7	0.0	26.7
76/06/23	13:46	1.3	150.00	23.0	174.	0.0	0.0	26.7	0.0	26.7
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	43.7	0.0	43.7
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	0.0	105.6	0.0	105.6
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	106.7	0.0	106.7
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	0.0	73.3	0.0	73.3
76/06/25	08:20	1.6	150.00	24.0	160.	0.0	0.0	13.3	0.0	13.3
76/06/25	11:11	1.9	150.00	24.0	160.	0.0	0.0	0.0	0.0	0.0
76/06/25	13:51	1.6	150.00	24.0	160.	0.0	0.0	40.0	0.0	40.0
76/06/25	16:45	1.3	154.00	24.0	188.	0.0	0.0	64.9	0.0	64.9
76/06/25	22:20	2.2	150.00	24.0	185.	0.0	0.0	206.7	0.0	206.7
76/06/26	01:30	2.0	150.00	24.0	168.	0.0	0.0	113.3	0.0	113.3
76/06/26	04:23	1.5	150.00	24.0	170.	0.0	0.0	66.7	0.0	66.7
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	33.3	0.0	33.3
76/06/28	20:55	1.3	150.00	25.0	147.	0.0	0.0	26.7	0.0	26.7
76/06/28	23:45	2.2	150.00	25.0	194.	0.0	0.0	60.0	0.0	60.0
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	0.0	13.3	0.0	13.3
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	0.0	0.0	0.0
76/06/30	11:11	1.7	150.00	26.0	227.	0.0	0.0	13.3	0.0	13.3
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	20.0	0.0	20.0
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	0.0	0.0	0.0	0.0
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	6.7	26.7	0.0	33.4
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	13.9	0.0	13.9
76/07/01	05:23	2.1	150.00	25.0	-9999.	0.0	0.0	166.7	0.0	166.7
76/07/02	08:20	1.5	150.00	25.0	229.	0.0	0.0	6.7	0.0	6.7

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	20.0	0.0	20.0
76/07/02	13:51	2.0	159.00	26.0	237.	0.0	0.0	6.3	0.0	6.3
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	13.4	0.0	13.4
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	20.0	0.0	20.0
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	50.3	0.0	50.3
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	0.0	0.0	0.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	13.3	0.0	13.3
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	6.7	0.0	6.7
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	20.0	0.0	20.0
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	33.3	0.0	33.3
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	40.0	6.7	46.7
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	6.7	6.7	13.4
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	6.7	0.0	6.7
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	0.0	0.0	0.0
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	0.0	0.0	0.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	19.1	0.0	19.1
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	0.0	0.0	0.0
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	6.7	6.7	13.4
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	6.7	0.0	6.7
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	0.0	13.3	13.3
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	0.0	6.7	6.7
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	6.7	0.0	6.7
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/14	11:11	1.6	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/14	13:53	2.1	151.00	25.0	214.	0.0	0.0	0.0	6.6	6.6
76/07/14	16:45	2.0	159.00	25.0	227.	0.0	0.0	31.4	0.0	31.4
76/07/14	20:12	1.3	156.00	25.0	221.	0.0	0.0	6.4	0.0	6.4
76/07/14	23:30	1.8	150.00	25.0	213.	0.0	0.0	0.0	0.0	0.0
76/07/15	02:30	2.3	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/15	05:25	1.8	150.00	25.0	125.	0.0	0.0	0.0	0.0	0.0
76/07/16	08:20	1.4	150.00	25.0	225.	0.0	0.0	0.0	0.0	0.0
76/07/16	11:08	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/16	13:46	1.9	150.00	25.0	222.	0.0	0.0	0.0	0.0	0.0
76/07/16	16:45	2.2	150.00	25.0	227.	0.0	0.0	0.0	6.7	6.7
76/07/16	19:27	1.9	150.00	25.0	220.	0.0	0.0	0.0	6.7	6.7
76/07/16	22:25	1.4	150.00	25.0	216.	0.0	0.0	0.0	0.0	0.0
76/07/17	01:20	1.8	150.00	25.0	194.	0.0	0.0	0.0	0.0	0.0
76/07/17	04:26	2.1	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/19	08:20	1.5	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/19	11:10	1.1	150.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	14:01	1.2	152.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/19	16:55	1.8	220.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	20:40	1.9	150.00	25.0	217.	0.0	0.0	6.7	0.0	6.7
76/07/19	23:35	1.4	150.00	25.0	210.	0.0	0.0	0.0	0.0	0.0
76/07/20	02:45	1.3	150.00	25.0	194.	0.0	0.0	6.7	0.0	6.7
76/07/20	06:00	2.8	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/21	08:12	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/21	11:05	1.5	150.00	25.0	219.	0.0	0.0	0.0	0.0	0.0
76/07/21	13:50	1.1	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	16:35	1.5	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	19:30	2.0	150.00	25.0	228.	0.0	0.0	0.0	0.0	0.0
76/07/21	22:20	1.9	150.00	25.0	222.	0.0	0.0	0.0	0.0	0.0
76/07/22	01:20	1.4	150.00	25.0	226.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/22	04:20	1.2	150.00	25.0	125.	0.0	0.0	0.0	0.0	0.0
76/07/23	08:20	1.8	150.00	25.0	218.	0.0	0.0	0.0	6.7	6.7
76/07/23	11:08	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/23	13:51	1.3	150.00	25.0	181.	0.0	0.0	0.0	0.0	0.0
76/07/23	17:45	1.4	150.00	25.0	178.	0.0	0.0	0.0	0.0	0.0
76/07/23	19:50	1.9	150.00	25.0	183.	0.0	0.0	0.0	0.0	0.0
76/07/23	22:40	2.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/24	05:00	1.3	150.00	25.0	195.	0.0	0.0	0.0	0.0	0.0
76/07/26	08:20	1.4	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/26	11:08	2.0	150.00	25.0	208.	0.0	0.0	0.0	0.0	0.0
76/07/26	13:52	1.8	150.00	25.0	209.	0.0	0.0	0.0	0.0	0.0
76/07/26	16:45	1.6	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/26	19:50	1.4	150.00	25.0	201.	0.0	0.0	0.0	0.0	0.0
76/07/26	22:40	2.2	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	00:05	2.3	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	04:10	1.6	150.00	25.0	165.	0.0	0.0	0.0	0.0	0.0
76/07/27	07:11	1.2	150.00	25.0	160.	0.0	0.0	0.0	0.0	0.0
76/07/28	08:20	1.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	11:06	2.0	150.00	25.0	199.	0.0	0.0	0.0	0.0	0.0
76/07/28	13:46	2.2	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/28	16:30	1.6	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/28	19:30	1.2	160.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	22:35	1.9	150.00	25.0	204.	0.0	0.0	0.0	6.7	6.7
76/07/29	01:30	2.3	150.00	25.0	204.	0.0	0.0	0.0	0.0	0.0
76/07/29	04:20	2.2	150.00	25.0	159.	0.0	0.0	0.0	0.0	0.0
76/07/29	07:06	1.4	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/30	08:20	1.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	11:13	1.5	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	13:53	2.2	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	17:50	2.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/04	09:42	1.5	162.51	3.0	119.	0.0	0.0	12.3	0.0	12.3
76/03/04	11:45	1.8	203.19	4.0	199.	0.0	0.0	19.7	0.0	19.7
76/03/04	15:16	2.0	180.73	4.5	119.	0.0	0.0	16.6	0.0	16.6
76/03/04	18:30	1.6	267.36	4.0	122.	0.0	0.0	3.7	0.0	3.7
76/03/04	21:45	1.5	267.36	3.0	117.	0.0	0.0	15.0	0.0	15.0
76/03/05	01:00	1.7	267.36	4.5	114.	0.0	0.0	3.7	0.0	3.7
76/03/05	04:10	2.0	267.36	4.0	112.	0.0	0.0	29.9	0.0	29.9
76/03/05	07:20	1.5	74.27	4.0	119.	0.0	0.0	53.9	0.0	53.9
76/03/08	08:53	1.4	267.36	4.0	122.	0.0	3.7	97.2	0.0	100.9
76/03/08	12:15	1.3	267.36	4.0	121.	0.0	3.7	127.2	0.0	130.9
76/03/08	15:30	1.7	267.36	5.0	125.	3.7	11.2	187.0	0.0	198.2
76/03/08	18:50	1.5	267.36	5.0	123.	0.0	0.0	63.6	0.0	63.6
76/03/08	22:00	1.2	267.36	4.0	122.	0.0	26.2	74.8	0.0	101.0
76/03/09	01:30	1.5	226.59	3.5	109.	13.2	4.4	57.4	0.0	61.8
76/03/09	04:35	2.0	226.59	4.5	112.	0.0	0.0	123.6	0.0	123.6
76/03/11	08:35	2.3	248.04	5.0	122.	0.0	4.0	28.2	0.0	32.2
76/03/11	11:40	1.7	267.36	4.0	124.	0.0	0.0	86.0	0.0	86.0
76/03/11	14:45	1.3	267.36	4.0	122.	0.0	0.0	89.8	0.0	89.8
76/03/11	17:50	1.6	129.71	4.0	116.	0.0	0.0	154.2	0.0	154.2
76/03/11	21:05	1.7	129.71	5.0	120.	0.0	0.0	138.8	0.0	138.8
76/03/12	00:10	1.1	118.90	3.5	122.	0.0	0.0	100.9	0.0	100.9
76/03/12	06:55	1.7	159.25	5.0	120.	0.0	0.0	6.3	0.0	6.3
76/03/15	08:20	2.0	129.71	5.0	129.	0.0	0.0	84.8	0.0	84.8
76/03/15	11:25	2.2	129.71	4.5	128.	0.0	0.0	115.6	0.0	115.6
76/03/15	14:25	1.5	129.71	4.0	131.	0.0	0.0	100.2	0.0	100.2
76/03/15	18:00	1.0	129.71	4.0	131.	0.0	0.0	92.5	0.0	92.5
76/03/15	21:05	1.9	159.25	4.5	128.	0.0	0.0	50.2	0.0	50.2
76/03/16	00:10	2.1	159.25	5.0	128.	0.0	0.0	56.5	0.0	56.5
76/03/16	03:15	1.4	145.16	3.5	124.	0.0	0.0	34.4	0.0	34.4
76/03/16	06:20	1.3	159.25	3.5	126.	0.0	0.0	37.7	0.0	37.7

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/18	14:30	1.8	129.71	5.0	128.	0.0	0.0	38.5	0.0	38.5
76/03/18	17:34	1.0	129.71	4.0	132.	0.0	0.0	84.8	0.0	84.8
76/03/18	20:40	0.8	118.90	3.5	126.	0.0	0.0	33.6	0.0	33.6
76/03/18	23:45	1.7	129.71	5.5	127.	0.0	0.0	23.1	0.0	23.1
76/03/19	02:50	2.0	129.71	3.5	119.	0.0	0.0	15.4	0.0	15.4
76/03/19	05:55	1.4	129.71	3.5	119.	0.0	0.0	61.7	0.0	61.7
76/03/19	09:00	1.0	129.71	3.5	125.	0.0	0.0	15.4	0.0	15.4
76/03/19	12:05	1.9	129.71	5.0	128.	0.0	0.0	15.4	0.0	15.4
76/03/22	08:30	1.3	136.20	4.0	126.	0.0	0.0	44.1	0.0	44.1
76/03/22	11:33	1.0	129.71	4.0	124.	0.0	0.0	15.4	0.0	15.4
76/03/22	14:37	1.3	129.71	4.5	122.	0.0	0.0	15.4	0.0	15.4
76/03/22	17:37	1.7	129.71	5.0	127.	0.0	0.0	30.8	0.0	30.8
76/03/22	20:50	1.3	129.71	4.5	128.	0.0	0.0	23.1	0.0	23.1
76/03/22	24:00	1.1	129.71	4.5	123.	0.0	0.0	0.0	0.0	0.0
76/03/23	03:04	2.7	129.71	5.0	121.	0.0	0.0	7.7	0.0	7.7
76/03/23	06:10	2.0	129.71	5.0	123.	0.0	0.0	15.4	0.0	15.4
76/03/25	08:17	2.0	129.71	4.5	132.	0.0	0.0	0.0	0.0	0.0
76/03/25	11:20	1.5	129.71	5.0	132.	0.0	0.0	15.4	0.0	15.4
76/03/25	14:25	1.2	129.71	5.5	133.	0.0	0.0	15.4	0.0	15.4
76/03/25	17:25	1.5	129.71	4.5	131.	0.0	0.0	15.4	0.0	15.4
76/03/25	20:27	2.0	129.71	6.0	134.	0.0	0.0	7.7	0.0	7.7
76/03/25	23:28	1.6	129.71	5.5	132.	0.0	0.0	15.4	0.0	15.4
76/03/26	02:30	1.2	142.89	5.0	122.	0.0	0.0	0.0	0.0	0.0
76/03/26	05:33	1.7	129.71	5.5	121.	0.0	0.0	0.0	0.0	0.0
76/03/29	09:00	1.8	129.71	6.5	181.	0.0	0.0	0.0	0.0	0.0
76/03/29	12:07	1.9	129.71	6.5	184.	0.0	0.0	0.0	0.0	0.0
76/03/29	15:10	1.4	118.90	6.5	186.	0.0	0.0	0.0	0.0	0.0
76/03/29	18:15	1.0	129.71	6.5	189.	0.0	0.0	0.0	0.0	0.0
76/03/29	21:20	1.9	129.71	7.0	193.	0.0	0.0	0.0	0.0	0.0
76/03/30	00:25	2.5	129.71	7.0	172.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	0.0	0.0	0.0	0.0	0.0
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	0.0	0.0	0.0
76/05/10	11:00	1.9	150.00	14.0	167.	0.0	0.0	0.0	0.0	0.0
76/05/10	13:50	1.3	150.00	14.0	164.	0.0	0.0	0.0	0.0	0.0
76/05/10	17:15	1.2	150.00	13.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/10	20:55	2.2	150.00	13.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/10	23:46	2.1	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/11	02:50	1.4	150.00	13.5	129.	0.0	0.0	0.0	0.0	0.0
76/05/11	05:30	1.2	150.00	13.0	126.	0.0	0.0	0.0	0.0	0.0
76/05/12	11:30	2.1	150.00	14.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/12	14:05	1.5	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/12	17:00	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/12	19:48	1.5	150.00	14.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/12	22:30	2.1	150.00	14.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/13	01:22	1.9	90.00	14.0	135.	0.0	0.0	0.0	11.1	11.1
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/14	11:20	1.9	150.00	15.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/14	14:10	2.0	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/14	17:00	1.4	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/14	19:50	1.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/14	22:45	2.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/15	01:40	2.4	150.00	14.5	131.	0.0	0.0	0.0	0.0	0.0
76/05/15	04:10	1.9	155.00	15.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/15	07:10	1.3	150.00	14.5	131.	0.0	0.0	0.0	0.0	0.0
76/05/17	08:33	1.4	150.00	15.0	145.	0.0	0.0	0.0	0.0	0.0
76/05/17	11:16	1.3	150.00	15.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/17	16:30	2.2	150.00	17.0	153.	0.0	0.0	0.0	0.0	0.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	0.0	0.0	0.0	0.0	0.0
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	0.0	0.0	0.0
76/05/10	11:00	1.9	150.00	14.0	167.	0.0	0.0	0.0	0.0	0.0
76/05/10	13:50	1.3	150.00	14.0	164.	0.0	0.0	0.0	0.0	0.0
76/05/10	17:15	1.2	150.00	13.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/10	20:55	2.2	150.00	13.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/10	23:46	2.1	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/11	02:50	1.4	150.00	13.5	129.	0.0	0.0	6.7	0.0	6.7
76/05/11	05:30	1.2	150.00	13.0	126.	0.0	0.0	0.0	0.0	0.0
76/05/12	11:30	2.1	150.00	14.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/12	14:05	1.5	150.00	14.0	146.	0.0	0.0	13.3	0.0	13.3
76/05/12	17:00	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/12	19:48	1.5	150.00	14.0	143.	0.0	0.0	6.7	0.0	6.7
76/05/12	22:30	2.1	150.00	14.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/13	01:22	1.9	90.00	14.0	135.	0.0	0.0	0.0	0.0	0.0
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/14	11:20	1.9	150.00	15.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/14	14:10	2.0	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/14	17:00	1.4	150.00	15.0	142.	0.0	0.0	6.7	0.0	6.7
76/05/14	19:50	1.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/14	22:45	2.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/15	01:40	2.4	150.00	14.5	131.	0.0	0.0	0.0	0.0	0.0
76/05/15	04:10	1.9	155.00	15.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/15	07:10	1.3	150.00	14.5	131.	0.0	0.0	0.0	0.0	0.0
76/05/17	08:33	1.4	150.00	15.0	145.	0.0	0.0	0.0	0.0	0.0
76/05/17	11:16	1.3	150.00	15.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	0.0	6.7	0.0	6.7
76/05/17	16:30	2.2	150.00	17.0	153.	0.0	0.0	0.0	0.0	0.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	0.0	0.0	20.0	0.0	20.0
76/05/17	22:12	1.3	150.00	16.0	150.	0.0	0.0	40.0	0.0	40.0
76/05/18	00:55	1.9	150.00	15.5	138.	0.0	0.0	20.0	0.0	20.0
76/05/18	03:40	2.4	150.00	16.0	137.	0.0	0.0	0.0	0.0	0.0
76/05/18	06:29	2.0	150.00	16.0	140.	0.0	0.0	20.0	0.0	20.0
76/05/19	08:40	1.5	150.00	15.0	148.	0.0	0.0	26.7	0.0	26.7
76/05/19	11:25	1.2	150.00	15.0	152.	0.0	0.0	20.0	0.0	20.0
76/05/19	14:28	1.3	150.00	15.0	156.	0.0	0.0	6.7	0.0	6.7
76/05/19	17:23	1.8	150.00	15.0	154.	0.0	0.0	20.0	0.0	20.0
76/05/19	20:23	1.5	150.00	16.0	160.	0.0	0.0	66.7	0.0	66.7
76/05/19	23:36	1.2	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/05/20	02:28	1.5	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/20	05:13	1.8	150.00	15.0	145.	0.0	0.0	133.3	0.0	133.3
76/05/21	08:20	2.1	150.00	15.0	147.	0.0	0.0	26.7	0.0	26.7
76/05/21	11:20	1.6	150.00	16.0	152.	0.0	0.0	6.7	0.0	6.7
76/05/21	14:17	1.4	150.00	16.0	164.	0.0	0.0	33.3	0.0	33.3
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	0.0	46.7	0.0	46.7
76/05/21	20:00	2.6	150.00	15.0	152.	0.0	0.0	20.0	0.0	20.0
76/05/21	23:00	1.7	150.00	15.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/22	01:50	1.5	150.00	15.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/22	04:37	1.7	150.00	15.0	128.	0.0	0.0	26.7	0.0	26.7
76/05/24	08:10	1.8	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/24	10:42	1.8	150.00	15.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/24	13:20	1.5	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/24	16:05	1.3	153.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/24	19:10	1.9	155.00	14.0	148.	0.0	0.0	0.0	0.0	0.0
76/05/24	21:48	2.2	150.00	15.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/25	01:05	1.8	150.00	14.0	136.	0.0	0.0	0.0	6.7	6.7
76/05/25	04:05	1.4	150.00	14.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/26	08:04	1.8	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	0.0	6.7	0.0	0.0	6.7
76/05/26	13:34	1.8	151.00	14.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	0.0	6.6	0.0	6.6
76/05/26	19:50	1.7	100.00	14.0	133.	0.0	0.0	0.0	0.0	0.0
76/05/26	21:40	2.3	150.00	14.0	135.	0.0	0.0	0.0	0.0	0.0
76/05/27	02:10	1.8	150.00	14.0	124.	0.0	0.0	0.0	0.0	0.0
76/05/27	05:00	1.3	150.00	13.0	123.	0.0	0.0	0.0	0.0	0.0
76/05/28	08:06	1.5	150.00	14.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/28	10:50	1.8	150.00	14.0	170.	0.0	0.0	0.0	0.0	0.0
76/05/28	13:45	1.8	150.00	14.0	158.	0.0	0.0	0.0	0.0	0.0
76/05/28	16:45	1.2	150.00	14.5	162.	0.0	0.0	0.0	0.0	0.0
76/05/28	19:53	1.4	156.00	14.8	155.	0.0	0.0	0.0	0.0	0.0
76/05/28	23:08	2.2	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/29	01:57	2.1	150.00	14.0	155.	0.0	0.0	0.0	0.0	0.0
76/05/29	04:55	1.5	150.00	14.0	165.	0.0	0.0	0.0	0.0	0.0
76/06/01	03:10	2.3	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0
76/06/01	06:20	1.6	150.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/01	09:35	1.3	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/06/01	12:18	1.7	150.00	15.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/01	15:04	2.1	149.00	15.0	178.	0.0	0.0	0.0	0.0	0.0
76/06/01	22:25	1.3	159.00	15.0	246.	0.0	0.0	0.0	0.0	0.0
76/06/02	08:08	1.4	150.00	15.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	0.0	0.0	6.7	0.0	6.7
76/06/02	13:23	1.9	150.00	15.0	173.	0.0	0.0	0.0	0.0	0.0
76/06/02	17:15	2.1	150.00	15.0	169.	0.0	0.0	0.0	0.0	0.0
76/06/02	20:04	1.6	150.00	15.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/03	00:25	1.9	150.00	15.0	144.	0.0	0.0	0.0	0.0	0.0
76/06/03	03:15	2.3	150.00	15.0	141.	0.0	0.0	6.7	0.0	6.7
76/06/03	06:00	2.0	150.00	15.0	144.	0.0	0.0	6.7	0.0	6.7
76/06/04	08:53	1.5	150.00	15.0	155.	0.0	0.0	0.0	0.0	0.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/04	14:15	1.5	151.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/04	17:50	2.0	150.00	16.5	160.	0.0	0.0	0.0	0.0	0.0
76/06/04	19:58	1.7	151.00	16.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/04	22:12	1.3	150.00	16.0	149.	0.0	0.0	0.0	0.0	0.0
76/06/05	01:00	1.3	150.00	16.0	140.	0.0	0.0	0.0	0.0	0.0
76/06/05	03:50	1.9	150.00	16.0	137.	0.0	0.0	0.0	0.0	0.0
76/06/07	08:15	2.0	150.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	0.0	0.0	0.0	0.0	0.0
76/06/07	13:20	1.0	150.00	17.0	163.	0.0	0.0	0.0	0.0	0.0
76/06/07	15:55	1.0	148.00	17.0	161.	0.0	0.0	0.0	0.0	0.0
76/06/07	18:35	1.8	150.00	17.5	162.	0.0	0.0	13.3	0.0	13.3
76/06/07	21:05	2.0	150.00	17.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/07	23:55	1.4	150.00	18.0	145.	0.0	0.0	6.7	0.0	6.7
76/06/08	02:40	1.2	150.00	17.0	137.	0.0	0.0	0.0	0.0	0.0
76/06/08	05:25	1.5	150.00	17.0	136.	0.0	0.0	13.3	0.0	13.3
76/06/09	08:12	1.9	150.00	17.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/09	10:56	2.0	150.00	18.0	164.	0.0	0.0	20.0	0.0	20.0
76/06/09	13:48	1.4	127.00	18.0	161.	0.0	0.0	0.0	0.0	0.0
76/06/09	17:25	1.1	150.00	18.0	157.	0.0	0.0	0.0	0.0	0.0
76/06/09	20:05	2.1	155.00	18.0	160.	0.0	0.0	0.0	0.0	0.0
76/06/09	23:00	2.3	150.00	18.5	164.	0.0	0.0	6.7	0.0	6.7
76/06/10	02:45	1.7	150.00	18.0	147.	0.0	0.0	13.3	0.0	13.3
76/06/10	04:30	1.3	150.00	18.0	141.	0.0	0.0	0.0	0.0	0.0
76/06/11	08:10	1.4	150.00	18.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	10:49	2.1	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	13:32	1.8	150.00	19.0	150.	0.0	0.0	113.3	0.0	113.3
76/06/11	16:11	1.3	150.00	19.0	150.	0.0	0.0	33.3	0.0	33.3
76/06/11	19:20	1.3	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/11	22:58	2.0	150.00	18.5	150.	0.0	0.0	20.0	0.0	20.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	0.0	0.0	20.0	0.0	20.0
76/06/12	03:45	1.8	150.00	19.0	150.	0.0	0.0	20.0	0.0	20.0
76/06/14	08:15	1.3	150.00	19.0	150.	0.0	0.0	33.3	0.0	33.3
76/06/14	10:59	1.5	150.00	19.0	150.	0.0	0.0	33.3	0.0	33.3
76/06/14	13:39	2.0	150.00	19.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/14	17:35	1.9	150.00	20.0	157.	0.0	0.0	313.3	0.0	313.3
76/06/14	20:56	1.3	150.00	20.0	156.	0.0	0.0	60.0	0.0	60.0
76/06/14	23:48	1.8	150.00	20.0	148.	0.0	0.0	40.0	0.0	40.0
76/06/15	02:30	2.2	150.00	20.0	143.	0.0	0.0	0.0	0.0	0.0
76/06/15	05:15	1.8	150.00	20.0	144.	0.0	0.0	33.3	0.0	33.3
76/06/16	08:10	1.3	150.00	20.0	166.	0.0	0.0	93.3	0.0	93.3
76/06/16	10:52	1.2	150.00	20.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/16	13:38	1.8	150.00	22.0	175.	0.0	0.0	20.0	0.0	20.0
76/06/16	16:20	2.0	150.00	23.0	178.	60.0	0.0	80.0	0.0	80.0
76/06/16	19:03	1.8	150.00	21.0	174.	186.7	0.0	6.7	0.0	6.7
76/06/16	23:10	1.4	150.00	21.0	165.	0.0	0.0	0.0	0.0	0.0
76/06/17	02:05	2.0	150.00	21.0	168.	0.0	0.0	6.7	0.0	6.7
76/06/17	04:55	2.1	150.00	21.0	206.	0.0	0.0	26.7	0.0	26.7
76/06/18	08:20	1.5	150.00	21.0	150.	0.0	0.0	46.7	0.0	46.7
76/06/18	11:09	1.1	150.00	21.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	13:51	1.4	151.00	21.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	16:40	1.9	152.00	22.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	22:25	1.4	150.00	22.0	150.	0.0	0.0	106.7	0.0	106.7
76/06/19	01:15	1.4	150.00	22.0	150.	0.0	0.0	300.0	0.0	300.0
76/06/19	04:10	1.9	150.00	22.0	150.	0.0	0.0	66.7	0.0	66.7
76/06/21	08:15	1.8	150.00	23.0	155.	0.0	0.0	286.7	0.0	286.7
76/06/21	11:01	1.5	150.00	22.0	155.	0.0	0.0	266.7	0.0	266.7
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	77.8	0.0	77.8
76/06/21	16:50	1.5	157.00	23.0	182.	0.0	0.0	133.8	0.0	133.8
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	0.0	146.7	0.0	146.7

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	266.7	0.0	266.7
76/06/22	01:20	1.5	150.00	22.0	164.	0.0	0.0	153.3	0.0	153.3
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	93.3	0.0	93.3
76/06/23	08:15	1.8	150.00	23.0	180.	0.0	0.0	86.7	0.0	86.7
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	93.3	0.0	93.3
76/06/23	13:46	1.3	150.00	23.0	174.	0.0	0.0	33.3	0.0	33.3
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	50.0	0.0	50.0
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	0.0	6.2	0.0	6.2
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	260.0	0.0	260.0
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	0.0	6.7	0.0	6.7
76/06/25	08:20	1.6	150.00	24.0	160.	0.0	0.0	40.0	0.0	40.0
76/06/25	11:11	1.9	150.00	24.0	160.	0.0	0.0	26.7	0.0	26.7
76/06/25	13:51	1.6	150.00	24.0	160.	0.0	0.0	6.7	0.0	6.7
76/06/25	16:45	1.3	154.00	24.0	188.	0.0	0.0	13.0	0.0	13.0
76/06/25	22:20	2.2	150.00	24.0	185.	0.0	0.0	33.3	0.0	33.3
76/06/26	01:30	2.0	150.00	24.0	168.	0.0	0.0	20.0	0.0	20.0
76/06/26	04:23	1.5	150.00	24.0	170.	0.0	0.0	120.0	0.0	120.0
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	13.3	0.0	13.3
76/06/28	20:55	1.3	150.00	25.0	147.	0.0	0.0	20.0	0.0	20.0
76/06/28	23:45	2.2	150.00	25.0	194.	0.0	0.0	20.0	0.0	20.0
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	0.0	0.0	0.0	0.0
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	13.3	0.0	13.3
76/06/30	11:11	1.7	150.00	26.0	227.	0.0	0.0	0.0	0.0	0.0
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	0.0	412.5	0.0	412.5
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	46.7	0.0	46.7
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	0.0	46.7	0.0	46.7
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	13.9	0.0	13.9
76/07/01	05:23	2.1	150.00	25.0	-9999.	0.0	0.0	146.7	0.0	146.7
76/07/02	08:20	1.5	150.00	25.0	229.	0.0	0.0	20.0	0.0	20.0

MORONE SPP.

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	6.7	0.0	6.7
76/07/02	13:51	2.0	159.00	26.0	237.	0.0	0.0	6.3	0.0	6.3
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	40.3	0.0	40.3
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	26.7	0.0	26.7
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	18.9	0.0	18.9
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	20.0	0.0	20.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	13.3	0.0	13.3
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	0.0	0.0	0.0
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	20.0	0.0	20.0
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	0.0	0.0	0.0
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	6.7	0.0	6.7
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	0.0	0.0	0.0
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	13.3	0.0	13.3
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	0.0	0.0	0.0
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	0.0	0.0	0.0
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	0.0	0.0	0.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	0.0	0.0	0.0
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	0.0	0.0	0.0
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	0.0	0.0	0.0
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	0.0	0.0	0.0
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/29	08:25	1.4	159.25	13.0	132.	0.0	0.0	0.0	0.0	0.0
76/04/29	14:27	1.8	159.25	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/04/29	17:28	1.2	159.25	14.0	155.	0.0	0.0	12.6	0.0	12.6
76/04/29	20:30	1.4	159.25	14.0	151.	0.0	0.0	0.0	0.0	0.0
76/04/29	23:32	2.0	159.25	14.0	149.	0.0	0.0	0.0	0.0	0.0
76/04/30	02:34	2.0	159.25	14.0	135.	0.0	0.0	0.0	0.0	0.0
76/04/30	05:37	1.5	159.25	14.0	130.	0.0	0.0	0.0	0.0	0.0
76/05/03	08:25	1.5	159.25	13.5	151.	0.0	0.0	0.0	0.0	0.0
76/05/03	11:40	1.5	151.00	13.5	149.	0.0	0.0	0.0	0.0	0.0
76/05/03	14:16	2.0	150.00	15.0	155.	0.0	6.7	0.0	0.0	6.7
76/05/03	16:47	1.9	152.00	14.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/03	19:30	1.4	150.00	14.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/03	22:15	1.2	150.00	13.0	131.	0.0	6.7	0.0	0.0	6.7
76/05/04	00:59	1.9	150.00	13.0	128.	0.0	0.0	0.0	0.0	0.0
76/05/04	03:32	2.0	150.00	13.0	129.	0.0	0.0	0.0	0.0	0.0
76/05/04	06:10	1.8	150.00	13.0	129.	0.0	0.0	6.7	0.0	6.7
76/05/05	08:30	1.8	150.00	13.0	153.	0.0	0.0	0.0	0.0	0.0
76/05/05	11:14	1.2	150.00	13.0	158.	0.0	0.0	0.0	0.0	0.0
76/05/05	14:00	1.6	150.00	14.0	165.	0.0	0.0	0.0	0.0	0.0
76/05/05	16:44	1.7	150.00	15.0	165.	0.0	6.7	0.0	0.0	6.7
76/05/05	19:23	1.8	152.00	14.0	158.	0.0	6.6	0.0	0.0	6.6
76/05/05	22:21	1.4	150.00	13.0	159.	0.0	0.0	0.0	0.0	0.0
76/05/06	01:10	1.5	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/06	03:48	2.0	150.00	13.0	138.	0.0	0.0	0.0	0.0	0.0
76/05/06	06:25	2.0	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/07	08:15	1.6	150.00	13.0	174.	0.0	0.0	0.0	0.0	0.0
76/05/07	11:00	1.3	150.00	13.0	174.	0.0	0.0	6.7	0.0	6.7
76/05/07	13:45	1.1	150.00	13.0	175.	0.0	0.0	0.0	0.0	0.0
76/05/07	16:16	1.4	150.00	14.0	178.	0.0	6.7	0.0	0.0	6.7
76/05/07	18:56	2.0	150.00	14.0	185.	0.0	0.0	6.7	0.0	6.7

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	0.0	6.7	6.7	0.0	13.4
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	6.7	0.0	0.0	6.7
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	0.0	0.0	0.0
76/05/10	11:00	1.9	150.00	14.0	167.	0.0	6.7	0.0	0.0	6.7
76/05/10	13:50	1.3	150.00	14.0	164.	0.0	6.7	0.0	0.0	6.7
76/05/10	17:15	1.2	150.00	13.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/10	20:55	2.2	150.00	13.0	152.	0.0	6.7	0.0	0.0	6.7
76/05/10	23:46	2.1	150.00	14.0	146.	0.0	13.3	13.3	0.0	26.6
76/05/11	02:50	1.4	150.00	13.5	129.	0.0	0.0	0.0	0.0	0.0
76/05/11	05:30	1.2	150.00	13.0	126.	0.0	13.3	0.0	0.0	13.3
76/05/12	11:30	2.1	150.00	14.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/12	14:05	1.5	150.00	14.0	146.	0.0	0.0	20.0	0.0	20.0
76/05/12	17:00	1.2	150.00	14.0	146.	0.0	6.7	0.0	0.0	6.7
76/05/12	19:48	1.5	150.00	14.0	143.	20.0	53.3	20.0	6.7	80.0
76/05/12	22:30	2.1	150.00	14.0	149.	0.0	26.7	46.7	0.0	73.4
76/05/13	01:22	1.9	90.00	14.0	135.	0.0	66.7	0.0	0.0	66.7
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	6.7	0.0	0.0	6.7
76/05/14	11:20	1.9	150.00	15.0	143.	0.0	13.3	0.0	0.0	13.3
76/05/14	14:10	2.0	150.00	15.0	141.	0.0	13.3	0.0	0.0	13.3
76/05/14	17:00	1.4	150.00	15.0	142.	0.0	26.7	0.0	0.0	26.7
76/05/14	19:50	1.0	150.00	15.0	142.	0.0	20.0	33.3	0.0	53.3
76/05/14	22:45	2.0	150.00	15.0	142.	0.0	40.0	0.0	0.0	40.0
76/05/15	01:40	2.4	150.00	14.5	131.	0.0	33.3	0.0	0.0	33.3
76/05/15	04:10	1.9	155.00	15.0	132.	0.0	32.3	6.5	0.0	38.8
76/05/15	07:10	1.3	150.00	14.5	131.	0.0	13.3	0.0	0.0	13.3
76/05/17	08:33	1.4	150.00	15.0	145.	0.0	6.7	0.0	0.0	6.7
76/05/17	11:16	1.3	150.00	15.0	149.	0.0	0.0	6.7	0.0	6.7
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	13.3	0.0	0.0	13.3
76/05/17	16:30	2.2	150.00	17.0	153.	0.0	86.7	60.0	0.0	146.7

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	0.0	73.3	53.3	0.0	126.6
76/05/17	22:12	1.3	150.00	16.0	150.	0.0	60.0	26.7	0.0	86.7
76/05/18	00:55	1.9	150.00	15.5	138.	0.0	133.3	100.0	0.0	233.3
76/05/18	03:40	2.4	150.00	16.0	137.	0.0	13.3	53.3	0.0	66.6
76/05/18	06:29	2.0	150.00	16.0	140.	0.0	13.3	40.0	0.0	53.3
76/05/19	08:40	1.5	150.00	15.0	148.	0.0	20.0	66.7	0.0	86.7
76/05/19	11:25	1.2	150.00	15.0	152.	0.0	13.3	6.7	0.0	20.0
76/05/19	14:28	1.3	150.00	15.0	156.	0.0	0.0	0.0	0.0	0.0
76/05/19	17:23	1.8	150.00	15.0	154.	0.0	6.7	40.0	0.0	46.7
76/05/19	20:23	1.5	150.00	16.0	160.	0.0	86.7	446.7	0.0	533.4
76/05/19	23:36	1.2	150.00	15.0	153.	0.0	66.7	220.0	0.0	286.7
76/05/20	02:28	1.5	150.00	15.0	141.	0.0	20.0	166.7	0.0	186.7
76/05/20	05:13	1.8	150.00	15.0	145.	0.0	0.0	120.0	0.0	120.0
76/05/21	08:20	2.1	150.00	15.0	147.	0.0	0.0	180.0	0.0	180.0
76/05/21	11:20	1.6	150.00	16.0	152.	0.0	20.0	193.3	0.0	213.3
76/05/21	14:17	1.4	150.00	16.0	164.	0.0	0.0	20.0	0.0	20.0
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	6.7	6.7	0.0	13.4
76/05/21	20:00	2.6	150.00	15.0	152.	0.0	126.7	286.7	0.0	413.4
76/05/21	23:00	1.7	150.00	15.0	149.	0.0	86.7	146.7	0.0	233.4
76/05/22	01:50	1.5	150.00	15.0	132.	0.0	80.0	46.7	0.0	126.7
76/05/22	04:37	1.7	150.00	15.0	128.	0.0	6.7	26.7	0.0	33.4
76/05/24	08:10	1.8	150.00	14.0	150.	0.0	33.3	26.7	0.0	60.0
76/05/24	10:42	1.8	150.00	15.0	151.	0.0	0.0	73.3	0.0	73.3
76/05/24	13:20	1.5	150.00	15.0	152.	0.0	6.7	113.3	0.0	120.0
76/05/24	16:05	1.3	153.00	14.0	150.	0.0	0.0	13.1	0.0	13.1
76/05/24	19:10	1.9	155.00	14.0	148.	0.0	19.4	103.2	0.0	122.6
76/05/24	21:48	2.2	150.00	15.0	151.	0.0	13.3	66.7	0.0	80.0
76/05/25	01:05	1.8	150.00	14.0	136.	0.0	20.0	86.7	0.0	106.7
76/05/25	04:05	1.4	150.00	14.0	132.	0.0	53.3	173.3	0.0	226.6
76/05/26	08:04	1.8	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	0.0	0.0	13.3	0.0	13.3
76/05/26	13:34	1.8	151.00	14.0	141.	0.0	0.0	19.9	0.0	19.9
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	0.0	6.6	0.0	6.6
76/05/26	19:50	1.7	100.00	14.0	133.	0.0	40.0	130.0	0.0	170.0
76/05/26	21:40	2.3	150.00	14.0	135.	0.0	13.3	40.0	0.0	53.3
76/05/27	02:10	1.8	150.00	14.0	124.	0.0	33.3	40.0	0.0	73.3
76/05/27	05:00	1.3	150.00	13.0	123.	0.0	6.7	20.0	0.0	26.7
76/05/28	08:06	1.5	150.00	14.0	160.	0.0	0.0	6.7	0.0	6.7
76/05/28	10:50	1.8	150.00	14.0	170.	0.0	0.0	13.3	0.0	13.3
76/05/28	13:45	1.8	150.00	14.0	158.	0.0	13.3	33.3	0.0	46.6
76/05/28	16:45	1.2	150.00	14.5	162.	0.0	0.0	13.3	0.0	13.3
76/05/28	19:53	1.4	156.00	14.8	155.	0.0	0.0	115.3	0.0	115.3
76/05/28	23:08	2.2	150.00	14.0	150.	0.0	6.7	33.3	0.0	40.0
76/05/29	01:57	2.1	150.00	14.0	155.	0.0	13.3	20.0	0.0	33.3
76/05/29	04:55	1.5	150.00	14.0	165.	0.0	26.7	100.0	0.0	126.7
76/06/01	03:10	2.3	150.00	14.0	140.	0.0	13.3	20.0	0.0	33.3
76/06/01	06:20	1.6	150.00	14.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/01	09:35	1.3	150.00	15.0	153.	0.0	0.0	6.7	0.0	6.7
76/06/01	12:18	1.7	150.00	15.0	171.	0.0	0.0	20.0	0.0	20.0
76/06/01	15:04	2.1	149.00	15.0	178.	0.0	6.7	6.7	0.0	13.4
76/06/01	22:25	1.3	159.00	15.0	246.	0.0	0.0	25.2	0.0	25.2
76/06/02	08:08	1.4	150.00	15.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	0.0	6.7	6.7	0.0	13.4
76/06/02	13:23	1.9	150.00	15.0	173.	0.0	0.0	20.0	0.0	20.0
76/06/02	17:15	2.1	150.00	15.0	169.	0.0	13.3	53.3	0.0	66.6
76/06/02	20:04	1.6	150.00	15.0	155.	0.0	20.0	66.7	0.0	86.7
76/06/03	00:25	1.9	150.00	15.0	144.	0.0	20.0	53.3	0.0	73.3
76/06/03	03:15	2.3	150.00	15.0	141.	0.0	0.0	13.3	0.0	13.3
76/06/03	06:00	2.0	150.00	15.0	144.	0.0	6.7	13.3	0.0	20.0
76/06/04	08:53	1.5	150.00	15.0	155.	0.0	0.0	6.7	0.0	6.7

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	0.0	0.0	20.0	0.0	20.0
76/06/04	14:15	1.5	151.00	16.0	154.	0.0	0.0	33.1	0.0	33.1
76/06/04	17:50	2.0	150.00	16.5	160.	0.0	6.7	0.0	0.0	6.7
76/06/04	19:58	1.7	151.00	16.0	150.	0.0	26.5	33.1	0.0	59.6
76/06/04	22:12	1.3	150.00	16.0	149.	0.0	20.0	33.3	0.0	53.3
76/06/05	01:00	1.3	150.00	16.0	140.	0.0	0.0	13.3	0.0	13.3
76/06/05	03:50	1.9	150.00	16.0	137.	0.0	20.0	33.3	0.0	53.3
76/06/07	08:15	2.0	150.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	0.0	6.7	33.3	0.0	40.0
76/06/07	13:20	1.0	150.00	17.0	163.	0.0	0.0	6.7	0.0	6.7
76/06/07	15:55	1.0	148.00	17.0	161.	0.0	0.0	13.5	0.0	13.5
76/06/07	18:35	1.8	150.00	17.5	162.	0.0	6.7	13.3	0.0	20.0
76/06/07	21:05	2.0	150.00	17.0	155.	0.0	6.7	33.3	0.0	40.0
76/06/07	23:55	1.4	150.00	18.0	145.	0.0	13.3	20.0	0.0	33.3
76/06/08	02:40	1.2	150.00	17.0	137.	0.0	0.0	6.7	0.0	6.7
76/06/08	05:25	1.5	150.00	17.0	136.	0.0	0.0	0.0	0.0	0.0
76/06/09	08:12	1.9	150.00	17.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/09	10:56	2.0	150.00	18.0	164.	0.0	0.0	0.0	0.0	0.0
76/06/09	13:48	1.4	127.00	18.0	161.	0.0	0.0	0.0	0.0	0.0
76/06/09	17:25	1.1	150.00	18.0	157.	0.0	0.0	0.0	0.0	0.0
76/06/09	20:05	2.1	155.00	18.0	160.	0.0	12.9	12.9	0.0	25.8
76/06/09	23:00	2.3	150.00	18.5	164.	0.0	0.0	0.0	0.0	0.0
76/06/10	02:45	1.7	150.00	18.0	147.	0.0	20.0	26.7	0.0	46.7
76/06/10	04:30	1.3	150.00	18.0	141.	0.0	0.0	13.3	0.0	13.3
76/06/11	08:10	1.4	150.00	18.0	150.	0.0	6.7	13.3	0.0	20.0
76/06/11	10:49	2.1	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	13:32	1.8	150.00	19.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/11	16:11	1.3	150.00	19.0	150.	0.0	13.3	40.0	0.0	53.3
76/06/11	19:20	1.3	150.00	19.0	150.	0.0	13.3	6.7	0.0	20.0
76/06/11	22:58	2.0	150.00	18.5	150.	0.0	0.0	20.0	0.0	20.0

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/12	03:45	1.8	150.00	19.0	150.	0.0	0.0	20.0	0.0	20.0
76/06/14	08:15	1.3	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/14	10:59	1.5	150.00	19.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/14	13:39	2.0	150.00	19.0	150.	0.0	0.0	20.0	0.0	20.0
76/06/14	17:35	1.9	150.00	20.0	157.	0.0	13.3	13.3	0.0	26.6
76/06/14	20:56	1.3	150.00	20.0	156.	0.0	13.3	6.7	0.0	20.0
76/06/14	23:48	1.8	150.00	20.0	148.	0.0	0.0	6.7	0.0	6.7
76/06/15	02:30	2.2	150.00	20.0	143.	0.0	0.0	6.7	0.0	6.7
76/06/15	05:15	1.8	150.00	20.0	144.	0.0	13.3	0.0	0.0	13.3
76/06/16	08:10	1.3	150.00	20.0	166.	0.0	0.0	0.0	0.0	0.0
76/06/16	10:52	1.2	150.00	20.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/16	13:38	1.8	150.00	22.0	175.	0.0	0.0	0.0	0.0	0.0
76/06/16	16:20	2.0	150.00	23.0	178.	0.0	0.0	0.0	0.0	0.0
76/06/16	19:03	1.8	150.00	21.0	174.	0.0	0.0	13.3	0.0	13.3
76/06/16	23:10	1.4	150.00	21.0	165.	0.0	20.0	6.7	0.0	26.7
76/06/17	02:05	2.0	150.00	21.0	168.	0.0	0.0	33.3	0.0	33.3
76/06/17	04:55	2.1	150.00	21.0	206.	0.0	26.7	6.7	0.0	33.4
76/06/18	08:20	1.5	150.00	21.0	150.	0.0	0.0	40.0	0.0	40.0
76/06/18	11:09	1.1	150.00	21.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	13:51	1.4	151.00	21.0	150.	0.0	6.6	26.5	0.0	33.1
76/06/18	16:40	1.9	152.00	22.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	22:25	1.4	150.00	22.0	150.	0.0	6.7	33.3	0.0	40.0
76/06/19	01:15	1.4	150.00	22.0	150.	0.0	0.0	20.0	0.0	20.0
76/06/19	04:10	1.9	150.00	22.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/21	08:15	1.8	150.00	23.0	155.	0.0	0.0	6.7	0.0	6.7
76/06/21	11:01	1.5	150.00	22.0	155.	0.0	0.0	6.7	0.0	6.7
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/21	16:50	1.5	157.00	23.0	182.	0.0	0.0	0.0	0.0	0.0
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	0.0	13.3	0.0	13.3

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	13.3	0.0	13.3
76/06/22	01:20	1.5	150.00	22.0	164.	0.0	6.7	26.7	0.0	33.4
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	13.3	0.0	13.3
76/06/23	08:15	1.8	150.00	23.0	180.	0.0	0.0	0.0	0.0	0.0
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	0.0	0.0	0.0
76/06/23	13:46	1.3	150.00	23.0	174.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	6.2	0.0	6.2
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	6.2	6.2	0.0	12.4
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	13.3	0.0	13.3
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	6.7	13.3	0.0	20.0
76/06/25	08:20	1.6	150.00	24.0	160.	0.0	0.0	0.0	0.0	0.0
76/06/25	11:11	1.9	150.00	24.0	160.	0.0	0.0	6.7	0.0	6.7
76/06/25	13:51	1.6	150.00	24.0	160.	0.0	0.0	0.0	0.0	0.0
76/06/25	16:45	1.3	154.00	24.0	188.	0.0	0.0	0.0	0.0	0.0
76/06/25	22:20	2.2	150.00	24.0	185.	0.0	6.7	0.0	0.0	6.7
76/06/26	01:30	2.0	150.00	24.0	168.	0.0	0.0	0.0	0.0	0.0
76/06/26	04:23	1.5	150.00	24.0	170.	0.0	6.7	0.0	0.0	6.7
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	0.0	0.0	0.0
76/06/28	20:55	1.3	150.00	25.0	147.	0.0	0.0	13.3	0.0	13.3
76/06/28	23:45	2.2	150.00	25.0	194.	0.0	13.3	0.0	0.0	13.3
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	6.7	6.7	0.0	13.4
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	0.0	0.0	0.0
76/06/30	11:11	1.7	150.00	26.0	227.	0.0	0.0	0.0	0.0	0.0
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	6.2	0.0	0.0	6.2
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	0.0	0.0	0.0	0.0
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/07/01	05:23	2.1	150.00	25.0	-9999.	0.0	6.7	0.0	0.0	6.7
76/07/02	08:20	1.5	150.00	25.0	229.	0.0	0.0	0.0	0.0	0.0

TESSELLATED DARTER

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	0.0	0.0	0.0
76/07/02	13:51	2.0	159.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	0.0	0.0	0.0
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	0.0	0.0	0.0
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	0.0	0.0	0.0
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	0.0	0.0	0.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	0.0	0.0	0.0
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	0.0	0.0	0.0
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	0.0	0.0	0.0
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	0.0	6.7	6.7
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	0.0	0.0	0.0
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	0.0	6.7	6.7
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	0.0	0.0	0.0
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	0.0	0.0	0.0
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	0.0	0.0	0.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	0.0	6.7	6.7
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	0.0	0.0	0.0
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	0.0	0.0	0.0
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	0.0	0.0	0.0
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/18	14:30	1.8	129.71	5.0	128.	0.0	0.0	0.0	0.0	0.0
76/03/18	17:34	1.0	129.71	4.0	132.	0.0	0.0	0.0	0.0	0.0
76/03/18	20:40	0.8	118.90	3.5	126.	0.0	0.0	0.0	0.0	0.0
76/03/18	23:45	1.7	129.71	5.5	127.	0.0	0.0	0.0	0.0	0.0
76/03/19	02:50	2.0	129.71	3.5	119.	0.0	0.0	0.0	0.0	0.0
76/03/19	05:55	1.4	129.71	3.5	119.	0.0	0.0	0.0	0.0	0.0
76/03/19	09:00	1.0	129.71	3.5	125.	0.0	0.0	0.0	0.0	0.0
76/03/19	12:05	1.9	129.71	5.0	128.	0.0	0.0	0.0	0.0	0.0
76/03/22	08:30	1.3	136.20	4.0	126.	0.0	0.0	0.0	0.0	0.0
76/03/22	11:33	1.0	129.71	4.0	124.	0.0	0.0	0.0	0.0	0.0
76/03/22	14:37	1.3	129.71	4.5	122.	0.0	0.0	0.0	0.0	0.0
76/03/22	17:37	1.7	129.71	5.0	127.	0.0	0.0	0.0	0.0	0.0
76/03/22	20:50	1.3	129.71	4.5	128.	0.0	0.0	0.0	0.0	0.0
76/03/22	24:00	1.1	129.71	4.5	123.	0.0	0.0	0.0	0.0	0.0
76/03/23	03:04	2.7	129.71	5.0	121.	0.0	0.0	0.0	0.0	0.0
76/03/23	06:10	2.0	129.71	5.0	123.	0.0	0.0	0.0	0.0	0.0
76/03/25	08:17	2.0	129.71	4.5	132.	0.0	0.0	0.0	0.0	0.0
76/03/25	11:20	1.5	129.71	5.0	132.	15.4	0.0	0.0	0.0	0.0
76/03/25	14:25	1.2	129.71	5.5	133.	0.0	0.0	0.0	0.0	0.0
76/03/25	17:25	1.5	129.71	4.5	131.	0.0	0.0	0.0	0.0	0.0
76/03/25	20:27	2.0	129.71	6.0	134.	0.0	0.0	0.0	0.0	0.0
76/03/25	23:28	1.6	129.71	5.5	132.	0.0	0.0	0.0	0.0	0.0
76/03/26	02:30	1.2	142.89	5.0	122.	0.0	0.0	0.0	0.0	0.0
76/03/26	05:33	1.7	129.71	5.5	121.	0.0	0.0	0.0	0.0	0.0
76/03/29	09:00	1.8	129.71	6.5	181.	0.0	0.0	0.0	0.0	0.0
76/03/29	12:07	1.9	129.71	6.5	184.	0.0	0.0	0.0	0.0	0.0
76/03/29	15:10	1.4	118.90	6.5	186.	16.8	0.0	0.0	0.0	0.0
76/03/29	18:15	1.0	129.71	6.5	189.	0.0	0.0	0.0	0.0	0.0
76/03/29	21:20	1.9	129.71	7.0	193.	0.0	0.0	0.0	0.0	0.0
76/03/30	00:25	2.5	129.71	7.0	172.	0.0	0.0	0.0	0.0	0.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000. CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/30	06:35	1.3	129.71	6.5	172.	7.7	0.0	0.0	0.0	0.0
76/04/01	11:30	2.5	129.71	9.1	177.	0.0	0.0	0.0	0.0	0.0
76/04/01	14:35	2.3	129.71	8.4	174.	0.0	0.0	0.0	0.0	0.0
76/04/01	17:40	1.7	129.71	7.6	166.	15.4	0.0	0.0	0.0	0.0
76/04/01	20:45	1.8	129.71	7.9	158.	15.4	0.0	0.0	0.0	0.0
76/04/01	23:50	2.4	129.71	7.9	169.	0.0	0.0	0.0	0.0	0.0
76/04/02	03:00	2.3	129.71	7.0	137.	46.3	0.0	0.0	0.0	0.0
76/04/02	06:05	1.8	129.71	7.0	149.	7.7	0.0	0.0	0.0	0.0
76/04/08	11:47	1.5	129.71	7.0	117.	7.7	0.0	0.0	0.0	0.0
76/04/08	17:51	1.9	136.20	7.0	118.	66.1	0.0	0.0	0.0	0.0
76/04/09	03:10	1.5	159.25	7.0	106.	12.6	0.0	0.0	0.0	0.0
76/04/09	06:20	1.9	159.25	7.0	114.	12.6	0.0	0.0	0.0	0.0
76/04/15	08:25	1.4	129.71	9.0	110.	200.4	0.0	0.0	0.0	0.0
76/04/15	11:26	2.2	129.71	9.0	118.	38.5	0.0	0.0	0.0	0.0
76/04/15	17:28	1.1	129.71	9.0	100.	246.7	0.0	0.0	0.0	0.0
76/04/15	20:35	1.6	129.71	8.0	100.	385.5	0.0	0.0	0.0	0.0
76/04/15	23:40	2.3	145.16	8.0	100.	55.1	0.0	0.0	0.0	0.0
76/04/16	02:43	2.0	129.71	8.0	94.	1048.5	0.0	0.0	0.0	0.0
76/04/16	05:48	1.3	129.71	9.0	94.	508.8	0.0	0.0	0.0	0.0
76/04/19	08:40	1.3	145.16	9.0	125.	282.4	0.0	0.0	0.0	0.0
76/04/20	00:00	1.4	129.71	9.0	123.	948.3	0.0	0.0	0.0	0.0
76/04/20	03:05	2.0	129.71	9.0	121.	632.2	0.0	0.0	0.0	0.0
76/04/20	06:10	2.0	129.71	9.0	120.	1164.1	0.0	0.0	0.0	0.0
76/04/22	09:55	1.5	159.25	10.5	132.	2084.8	0.0	6.3	0.0	6.3
76/04/22	13:05	1.3	192.49	12.0	132.	992.2	0.0	0.0	0.0	0.0
76/04/22	16:13	1.7	192.49	12.0	138.	1927.4	0.0	0.0	0.0	0.0
76/04/22	19:28	2.1	192.49	12.5	144.	940.3	0.0	5.2	0.0	5.2
76/04/22	22:30	1.7	159.25	11.0	141.	1205.7	0.0	0.0	0.0	0.0
76/04/23	05:34	2.0	159.25	11.0	134.	2511.8	0.0	6.3	0.0	6.3
76/04/23	08:45	2.0	145.16	11.5	150.	3458.2	0.0	0.0	0.0	0.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/29	08:25	1.4	159.25	13.0	132.	157.0	6.3	0.0	0.0	6.3
76/04/29	14:27	1.8	159.25	14.0	146.	87.9	0.0	6.3	0.0	6.3
76/04/29	17:28	1.2	159.25	14.0	155.	163.3	0.0	6.3	0.0	6.3
76/04/29	20:30	1.4	159.25	14.0	151.	113.0	0.0	0.0	0.0	0.0
76/04/29	23:32	2.0	159.25	14.0	149.	37.7	0.0	0.0	0.0	0.0
76/04/30	02:34	2.0	159.25	14.0	135.	37.7	0.0	18.8	0.0	18.8
76/04/30	05:37	1.5	159.25	14.0	130.	131.9	0.0	6.3	0.0	6.3
76/05/03	08:25	1.5	159.25	13.5	151.	263.7	6.3	351.7	0.0	358.0
76/05/03	11:40	1.5	151.00	13.5	149.	973.5	0.0	278.1	0.0	278.1
76/05/03	14:16	2.0	150.00	15.0	155.	920.0	0.0	186.7	0.0	186.7
76/05/03	16:47	1.9	152.00	14.0	152.	111.8	0.0	1230.3	0.0	1230.3
76/05/03	19:30	1.4	150.00	14.0	151.	746.7	0.0	186.7	0.0	186.7
76/05/03	22:15	1.2	150.00	13.0	131.	213.3	0.0	320.0	0.0	320.0
76/05/04	00:59	1.9	150.00	13.0	128.	260.0	13.3	573.3	0.0	586.6
76/05/04	03:32	2.0	150.00	13.0	129.	93.3	0.0	280.0	0.0	280.0
76/05/04	06:10	1.8	150.00	13.0	129.	360.0	0.0	526.7	0.0	526.7
76/05/05	08:30	1.4	150.00	13.0	153.	240.0	0.0	313.3	0.0	313.3
76/05/05	11:14	1.2	150.00	13.0	158.	160.0	6.7	126.7	0.0	133.4
76/05/05	14:00	1.6	150.00	14.0	165.	320.0	0.0	126.7	0.0	126.7
76/05/05	16:44	1.7	150.00	15.0	165.	40.0	0.0	106.7	0.0	106.7
76/05/05	19:23	1.8	152.00	14.0	158.	105.3	0.0	157.9	0.0	157.9
76/05/05	22:21	1.4	150.00	13.0	159.	100.0	0.0	100.0	0.0	100.0
76/05/06	01:10	1.5	150.00	13.0	143.	6.7	0.0	106.7	0.0	106.7
76/05/06	03:48	2.0	150.00	13.0	138.	53.3	0.0	320.0	0.0	320.0
76/05/06	06:25	2.0	150.00	13.0	143.	286.7	0.0	406.7	0.0	406.7
76/05/07	08:15	1.6	150.00	13.0	174.	93.3	0.0	100.0	0.0	100.0
76/05/07	11:00	1.3	150.00	13.0	174.	46.7	0.0	520.0	0.0	520.0
76/05/07	13:45	1.1	150.00	13.0	175.	486.7	0.0	180.0	0.0	180.0
76/05/07	16:16	1.4	150.00	14.0	178.	433.3	0.0	326.7	0.0	326.7
76/05/07	18:56	2.0	150.00	14.0	185.	326.7	0.0	233.3	0.0	233.3

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	106.7	0.0	206.7	0.0	206.7
76/05/08	00:21	1.3	150.00	13.0	160.	280.0	0.0	106.7	0.0	106.7
76/05/08	03:14	1.3	77.00	13.0	143.	493.5	0.0	26.0	0.0	26.0
76/05/10	08:20	2.0	150.00	14.0	168.	486.7	6.7	360.0	0.0	366.7
76/05/10	11:00	1.9	150.00	14.0	167.	166.7	6.7	213.3	0.0	220.0
76/05/10	13:50	1.3	150.00	14.0	164.	240.0	0.0	233.3	0.0	233.3
76/05/10	17:15	1.2	150.00	13.0	147.	273.3	0.0	106.7	0.0	106.7
76/05/10	20:55	2.2	150.00	13.0	152.	140.0	0.0	100.0	0.0	100.0
76/05/10	23:46	2.1	150.00	14.0	146.	180.0	0.0	213.3	0.0	213.3
76/05/11	02:50	1.4	150.00	13.5	129.	706.7	0.0	206.7	0.0	206.7
76/05/11	05:30	1.2	150.00	13.0	126.	313.3	0.0	240.0	0.0	240.0
76/05/12	11:30	2.1	150.00	14.0	147.	346.7	0.0	166.7	0.0	166.7
76/05/12	14:05	1.5	150.00	14.0	146.	740.0	0.0	106.7	0.0	106.7
76/05/12	17:00	1.2	150.00	14.0	146.	920.0	0.0	126.7	0.0	126.7
76/05/12	19:48	1.5	150.00	14.0	143.	846.7	0.0	93.3	0.0	93.3
76/05/12	22:30	2.1	150.00	14.0	149.	366.7	0.0	166.7	0.0	166.7
76/05/13	01:22	1.9	90.00	14.0	135.	888.9	0.0	122.2	0.0	122.2
76/05/14	08:35	1.2	150.00	14.0	146.	406.7	0.0	93.3	0.0	93.3
76/05/14	11:20	1.9	150.00	15.0	143.	293.3	6.7	80.0	0.0	86.7
76/05/14	14:10	2.0	150.00	15.0	141.	380.0	0.0	46.7	0.0	46.7
76/05/14	17:00	1.4	150.00	15.0	142.	940.0	0.0	20.0	0.0	20.0
76/05/14	19:50	1.0	150.00	15.0	142.	133.4	0.0	80.0	0.0	80.0
76/05/14	22:45	2.0	150.00	15.0	142.	100.0	0.0	6.7	0.0	6.7
76/05/15	01:80	2.4	150.00	14.5	131.	93.3	0.0	20.0	0.0	20.0
76/05/15	04:10	1.9	155.00	15.0	132.	1174.2	0.0	6.5	0.0	6.5
76/05/15	07:10	1.3	150.00	14.5	131.	413.3	6.7	33.3	0.0	40.0
76/05/17	08:33	1.4	150.00	15.0	145.	633.3	6.7	93.3	0.0	100.0
76/05/17	11:16	1.3	150.00	15.0	149.	766.7	0.0	26.7	0.0	26.7
76/05/17	13:52	2.0	150.00	15.0	152.	846.7	0.0	33.3	0.0	33.3
76/05/17	16:30	2.2	150.00	17.0	153.	466.7	33.3	226.7	0.0	260.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	586.7	13.3	73.3	0.0	86.6
76/05/17	22:12	1.3	150.00	16.0	150.	53.3	13.3	200.0	0.0	213.3
76/05/18	00:55	1.9	150.00	15.5	138.	400.0	26.6	253.3	0.0	279.9
76/05/18	03:40	2.4	150.00	16.0	137.	213.3	66.7	60.0	0.0	126.7
76/05/18	06:29	2.0	150.00	16.0	140.	1153.3	0.0	253.3	0.0	253.3
76/05/19	08:40	1.5	150.00	15.0	148.	820.0	0.0	453.3	0.0	453.3
76/05/19	11:25	1.2	150.00	15.0	152.	360.0	26.7	180.0	0.0	206.7
76/05/19	14:28	1.3	150.00	15.0	156.	166.7	6.7	253.3	0.0	260.0
76/05/19	17:23	1.8	150.00	15.0	154.	46.7	6.7	700.0	0.0	706.7
76/05/19	20:23	1.5	150.00	16.0	160.	153.3	0.0	1206.7	0.0	1206.7
76/05/19	23:36	1.2	150.00	15.0	153.	46.7	6.7	286.7	0.0	293.4
76/05/20	02:28	1.5	150.00	15.0	141.	0.0	0.0	626.6	0.0	626.6
76/05/20	05:13	1.8	150.00	15.0	145.	6.7	66.7	1286.7	0.0	1353.4
76/05/21	08:20	2.1	150.00	15.0	147.	66.7	0.0	1680.0	0.0	1680.0
76/05/21	11:20	1.6	150.00	16.0	152.	260.0	20.0	566.6	0.0	586.6
76/05/21	14:17	1.4	150.00	16.0	164.	140.0	0.0	1646.7	0.0	1646.7
76/05/21	17:05	2.0	150.00	16.0	159.	26.7	0.0	780.0	0.0	780.0
76/05/21	20:00	2.6	150.00	15.0	152.	40.0	0.0	440.0	0.0	440.0
76/05/21	23:00	1.7	150.00	15.0	149.	166.7	13.4	1140.0	0.0	1153.4
76/05/22	01:50	1.5	150.00	15.0	132.	46.7	6.7	633.3	0.0	640.0
76/05/22	04:37	1.7	150.00	15.0	128.	13.3	20.0	2233.3	0.0	2253.3
76/05/24	08:10	1.8	150.00	14.0	150.	33.3	6.7	4660.0	0.0	4666.7
76/05/24	10:42	1.8	150.00	15.0	151.	26.7	0.0	2780.0	0.0	2780.0
76/05/24	13:20	1.5	150.00	15.0	152.	173.3	0.0	3706.7	0.0	3706.7
76/05/24	16:05	1.3	153.00	14.0	150.	26.1	0.0	3522.9	0.0	3522.9
76/05/24	19:10	1.9	155.00	14.0	148.	12.9	0.0	6264.6	0.0	6264.6
76/05/24	21:48	2.2	150.00	15.0	151.	26.7	0.0	3080.0	0.0	3080.0
76/05/25	01:05	1.8	150.00	14.0	136.	40.0	0.0	1420.0	0.0	1420.0
76/05/25	04:05	1.4	150.00	14.0	132.	80.0	6.7	5620.0	0.0	5626.7
76/05/26	08:04	1.8	150.00	14.0	140.	13.3	0.0	1220.0	0.0	1220.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	86.7	0.0	2186.6	0.0	2186.6
76/05/26	13:34	1.8	151.00	14.0	141.	19.9	0.0	1503.3	0.0	1503.3
76/05/26	16:32	1.4	151.00	14.0	139.	99.3	0.0	1172.2	0.0	1172.2
76/05/26	19:50	1.7	100.00	14.0	133.	30.0	0.0	4410.0	0.0	4410.0
76/05/26	21:40	2.3	150.00	14.0	135.	26.7	0.0	1080.0	0.0	1080.0
76/05/27	02:10	1.8	150.00	14.0	124.	40.0	0.0	3266.7	0.0	3266.7
76/05/27	05:00	1.3	150.00	13.0	123.	26.7	6.7	2213.3	0.0	2220.0
76/05/28	08:06	1.5	150.00	14.0	160.	26.7	0.0	513.3	0.0	513.3
76/05/28	10:50	1.8	150.00	14.0	170.	13.3	0.0	620.0	0.0	620.0
76/05/28	13:45	1.8	150.00	14.0	158.	53.3	13.3	1326.6	0.0	1339.9
76/05/28	16:45	1.2	150.00	14.5	162.	13.3	0.0	1826.7	0.0	1826.7
76/05/28	19:53	1.4	156.00	14.8	155.	70.5	0.0	1711.5	0.0	1711.5
76/05/28	23:08	2.2	150.00	14.0	150.	6.7	0.0	1353.3	0.0	1353.3
76/05/29	01:57	2.1	150.00	14.0	155.	40.0	0.0	1480.0	0.0	1480.0
76/05/29	04:55	1.5	150.00	14.0	165.	260.0	0.0	1793.3	0.0	1793.3
76/06/01	03:10	2.3	150.00	14.0	140.	93.3	6.7	606.7	0.0	613.4
76/06/01	06:20	1.6	150.00	14.0	150.	460.0	0.0	726.7	0.0	726.7
76/06/01	09:35	1.3	150.00	15.0	153.	200.0	0.0	500.0	0.0	500.0
76/06/01	12:18	1.7	150.00	15.0	171.	153.3	0.0	300.0	0.0	300.0
76/06/01	15:04	2.1	149.00	15.0	178.	40.3	6.7	375.8	0.0	382.5
76/06/01	22:25	1.3	159.00	15.0	246.	213.8	0.0	119.5	0.0	119.5
76/06/02	08:08	1.4	150.00	15.0	-9999.	266.7	0.0	600.0	0.0	600.0
76/06/02	10:50	1.3	150.00	14.0	171.	140.0	0.0	513.3	0.0	513.3
76/06/02	13:23	1.9	150.00	15.0	173.	253.3	0.0	280.0	0.0	280.0
76/06/02	17:15	2.1	150.00	15.0	169.	273.3	0.0	406.7	0.0	406.7
76/06/02	20:04	1.6	150.00	15.0	155.	860.0	0.0	560.0	0.0	560.0
76/06/03	00:25	1.9	150.00	15.0	144.	340.0	0.0	526.7	0.0	526.7
76/06/03	03:15	2.3	150.00	15.0	141.	120.0	0.0	693.3	0.0	693.3
76/06/03	06:00	2.0	150.00	15.0	144.	253.3	0.0	820.0	0.0	820.0
76/06/04	08:53	1.5	150.00	15.0	155.	480.0	0.0	633.4	0.0	633.4

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	313.3	0.0	720.0	0.0	720.0
76/06/04	14:15	1.5	151.00	16.0	154.	377.5	0.0	185.4	0.0	185.4
76/06/04	17:50	2.0	150.00	16.5	160.	186.7	0.0	126.6	0.0	126.6
76/06/04	19:58	1.7	151.00	16.0	150.	377.5	0.0	172.2	0.0	172.2
76/06/04	22:12	1.3	150.00	16.0	149.	853.3	0.0	606.6	0.0	606.6
76/06/05	01:00	1.3	150.00	16.0	140.	20.0	0.0	213.4	0.0	213.4
76/06/05	03:50	1.9	150.00	16.0	137.	373.3	0.0	686.6	0.0	686.6
76/06/07	08:15	2.0	150.00	16.0	154.	40.0	0.0	60.0	0.0	60.0
76/06/07	10:39	1.5	150.00	16.0	163.	80.0	0.0	126.7	0.0	126.7
76/06/07	13:20	1.0	150.00	17.0	163.	160.0	0.0	60.0	0.0	60.0
76/06/07	15:55	1.0	148.00	17.0	161.	20.3	0.0	202.7	0.0	202.7
76/06/07	18:35	1.8	150.00	17.5	162.	66.7	0.0	360.0	0.0	360.0
76/06/07	21:05	2.0	150.00	17.0	155.	40.0	0.0	13.3	0.0	13.3
76/06/07	23:55	1.4	150.00	18.0	145.	126.7	0.0	53.4	0.0	53.4
76/06/08	02:40	1.2	150.00	17.0	137.	60.0	6.7	100.0	0.0	106.7
76/06/08	05:25	1.5	150.00	17.0	136.	140.0	0.0	126.7	0.0	126.7
76/06/09	08:12	1.9	150.00	17.0	158.	220.0	0.0	326.6	0.0	326.6
76/06/09	10:56	2.0	150.00	18.0	164.	40.0	0.0	120.0	0.0	120.0
76/06/09	13:48	1.4	127.00	18.0	161.	196.9	0.0	307.1	0.0	307.1
76/06/09	17:25	1.1	150.00	18.0	157.	213.3	0.0	0.0	0.0	0.0
76/06/09	20:05	2.1	155.00	18.0	160.	109.7	0.0	258.1	0.0	258.1
76/06/09	23:00	2.3	150.00	18.5	164.	13.3	0.0	73.3	0.0	73.3
76/06/10	02:45	1.7	150.00	18.0	147.	100.0	0.0	273.3	0.0	273.3
76/06/10	04:30	1.3	150.00	18.0	141.	53.3	0.0	80.0	0.0	80.0
76/06/11	08:10	1.4	150.00	18.0	150.	140.0	0.0	506.7	0.0	506.7
76/06/11	10:49	2.1	150.00	19.0	150.	13.3	0.0	400.0	0.0	400.0
76/06/11	13:32	1.8	150.00	19.0	150.	33.3	0.0	153.3	0.0	153.3
76/06/11	16:11	1.3	150.00	19.0	150.	80.0	0.0	246.7	0.0	246.7
76/06/11	19:20	1.3	150.00	19.0	150.	40.0	0.0	253.3	0.0	253.3
76/06/11	22:58	2.0	150.00	18.5	150.	46.7	0.0	140.0	0.0	140.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	13.3	0.0	280.0	0.0	280.0
76/06/12	03:45	1.8	150.00	19.0	150.	120.0	0.0	326.7	0.0	326.7
76/06/14	08:15	1.3	150.00	19.0	150.	6.7	0.0	820.0	0.0	820.0
76/06/14	10:59	1.5	150.00	19.0	150.	160.0	0.0	660.0	0.0	660.0
76/06/14	13:39	2.0	150.00	19.0	150.	20.0	0.0	286.7	0.0	286.7
76/06/14	17:35	1.9	150.00	20.0	157.	20.0	0.0	300.0	0.0	300.0
76/06/14	20:56	1.3	150.00	20.0	156.	13.3	0.0	653.3	0.0	653.3
76/06/14	23:48	1.8	150.00	20.0	148.	33.3	0.0	813.3	0.0	813.3
76/06/15	02:30	2.2	150.00	20.0	143.	13.3	0.0	80.0	0.0	80.0
76/06/15	05:15	1.8	150.00	20.0	144.	40.0	0.0	593.3	0.0	593.3
76/06/16	08:10	1.3	150.00	20.0	166.	53.3	0.0	1546.7	0.0	1546.7
76/06/16	10:52	1.2	150.00	20.0	171.	0.0	0.0	586.7	0.0	586.7
76/06/16	13:38	1.8	150.00	22.0	175.	26.7	0.0	913.3	0.0	913.3
76/06/16	16:20	2.0	150.00	23.0	178.	0.0	0.0	900.0	0.0	900.0
76/06/16	19:03	1.8	150.00	21.0	174.	0.0	0.0	620.0	0.0	620.0
76/06/16	23:10	1.4	150.00	21.0	165.	6.7	0.0	86.7	0.0	86.7
76/06/17	02:05	2.0	150.00	21.0	168.	73.3	0.0	1553.4	0.0	1553.4
76/06/17	04:55	2.1	150.00	21.0	206.	26.7	0.0	133.3	0.0	133.3
76/06/18	08:20	1.5	150.00	21.0	150.	93.3	0.0	820.0	0.0	820.0
76/06/18	11:09	1.1	150.00	21.0	150.	13.3	0.0	340.0	0.0	340.0
76/06/18	13:51	1.4	151.00	21.0	150.	13.2	0.0	410.6	0.0	410.6
76/06/18	16:40	1.9	152.00	22.0	150.	26.3	0.0	901.3	0.0	901.3
76/06/18	22:25	1.4	150.00	22.0	150.	26.7	0.0	1080.0	0.0	1080.0
76/06/19	01:15	1.4	150.00	22.0	150.	26.7	0.0	1173.3	0.0	1173.3
76/06/19	04:10	1.9	150.00	22.0	150.	13.3	0.0	1560.0	0.0	1560.0
76/06/21	08:15	1.8	150.00	23.0	155.	0.0	0.0	340.0	0.0	340.0
76/06/21	11:01	1.5	150.00	22.0	155.	6.7	0.0	86.7	0.0	86.7
76/06/21	13:51	1.2	167.00	22.0	155.	6.0	0.0	197.6	0.0	197.6
76/06/21	16:50	1.5	157.00	23.0	182.	0.0	0.0	745.2	0.0	745.2
76/06/21	19:45	2.0	150.00	23.5	176.	6.7	0.0	560.0	0.0	560.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22;30	1.9	150.00	23.0	175.	0.0	0.0	186.7	0.0	186.7
76/06/22	01;20	1.5	150.00	22.0	164.	0.0	0.0	526.6	0.0	526.6
76/06/22	04;10	1.4	150.00	22.0	159.	0.0	0.0	1173.3	0.0	1173.3
76/06/23	08;15	1.8	150.00	23.0	180.	0.0	0.0	533.3	0.0	533.3
76/06/23	11;06	1.6	150.00	23.0	183.	0.0	0.0	120.0	0.0	120.0
76/06/23	13;46	1.3	150.00	23.0	174.	20.0	0.0	1033.3	0.0	1033.3
76/06/23	16;44	1.3	160.00	23.0	184.	0.0	0.0	312.5	0.0	312.5
76/06/23	19;37	1.9	161.00	23.5	181.	6.2	0.0	739.1	0.0	739.1
76/06/24	01;30	1.7	150.00	24.0	180.	0.0	0.0	1420.0	6.7	1426.7
76/06/24	04;15	1.3	150.00	23.0	177.	0.0	0.0	1780.0	0.0	1780.0
76/06/25	08;20	1.6	150.00	24.0	160.	0.0	0.0	640.0	0.0	640.0
76/06/25	11;11	1.9	150.00	24.0	160.	0.0	0.0	386.7	0.0	386.7
76/06/25	13;51	1.6	150.00	24.0	160.	0.0	0.0	1440.0	0.0	1440.0
76/06/25	16;45	1.3	154.00	24.0	188.	0.0	0.0	779.2	0.0	779.2
76/06/25	22;20	2.2	150.00	24.0	185.	0.0	0.0	2480.0	0.0	2480.0
76/06/26	01;30	2.0	150.00	24.0	168.	0.0	0.0	573.4	0.0	573.4
76/06/26	04;23	1.5	150.00	24.0	170.	0.0	0.0	1600.0	0.0	1600.0
76/06/28	17;00	1.5	150.00	25.0	172.	0.0	0.0	386.7	0.0	386.7
76/06/28	20;55	1.3	150.00	25.0	147.	0.0	0.0	980.0	0.0	980.0
76/06/28	23;45	2.2	150.00	25.0	194.	0.0	0.0	933.3	0.0	933.3
76/06/29	05;32	1.6	150.00	25.0	186.	0.0	0.0	346.7	0.0	346.7
76/06/30	08;20	1.3	150.00	25.0	217.	0.0	0.0	133.3	0.0	133.3
76/06/30	11;11	1.7	150.00	26.0	227.	0.0	0.0	113.3	0.0	113.3
76/06/30	13;51	2.2	150.00	26.0	223.	0.0	0.0	660.0	0.0	660.0
76/06/30	16;44	2.1	160.00	25.5	216.	0.0	0.0	50.0	0.0	50.0
76/06/30	19;54	1.5	150.00	25.0	223.	0.0	0.0	146.7	0.0	146.7
76/06/30	22;55	1.8	150.00	25.0	225.	0.0	0.0	213.3	0.0	213.3
76/07/01	01;35	2.4	72.00	25.0	180.	0.0	0.0	138.9	0.0	138.9
76/07/01	05;23	2.1	150.00	25.0	-9999.	0.0	0.0	146.7	6.7	153.4
76/07/02	08;20	1.5	150.00	25.0	229.	0.0	0.0	140.0	0.0	140.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	20.0	0.0	20.0
76/07/02	13:51	2.0	159.00	26.0	237.	0.0	0.0	50.3	0.0	50.3
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	26.8	0.0	26.8
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	106.7	0.0	106.7
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	44.0	0.0	44.0
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	273.3	6.7	280.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	180.0	26.6	206.6
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	46.7	0.0	46.7
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	40.0	0.0	40.0
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	58.8	10.7	69.5
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	53.3	6.7	60.0
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	326.7	73.3	400.0
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	506.7	220.0	726.7
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	40.0	0.0	40.0
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	13.3	0.0	13.3
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	6.7	0.0	6.7
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	6.7	0.0	6.7
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	6.7	0.0	6.7
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	31.8	6.4	38.2
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	113.3	13.3	126.6
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	6.7	0.0	6.7
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	6.7	0.0	6.7
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	13.3	106.7	120.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	26.7	160.0	186.7
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	13.3	46.7	60.0
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	100.0	146.6	246.6
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	13.3	0.0	13.3
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	13.3	0.0	13.3

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/14	11:11	1.6	150.00	25.0	218.	0.0	0.0	6.7	0.0	6.7
76/07/14	13:53	2.1	151.00	25.0	214.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:45	2.0	159.00	25.0	227.	0.0	0.0	12.6	0.0	12.6
76/07/14	20:12	1.3	156.00	25.0	221.	0.0	0.0	76.9	96.2	173.1
76/07/14	23:30	1.8	150.00	25.0	213.	0.0	0.0	66.7	66.7	133.4
76/07/15	02:30	2.3	150.00	25.0	203.	0.0	0.0	40.0	93.3	133.3
76/07/15	05:25	1.8	150.00	25.0	125.	0.0	0.0	53.3	0.0	53.3
76/07/16	08:20	1.4	150.00	25.0	225.	0.0	0.0	13.3	0.0	13.3
76/07/16	11:08	1.3	150.00	25.0	220.	0.0	0.0	13.3	0.0	13.3
76/07/16	13:46	1.9	150.00	25.0	222.	0.0	0.0	20.0	0.0	20.0
76/07/16	16:45	2.2	150.00	25.0	227.	0.0	0.0	0.0	0.0	0.0
76/07/16	19:27	1.9	150.00	25.0	220.	0.0	0.0	26.7	20.0	46.7
76/07/16	22:25	1.4	150.00	25.0	216.	0.0	0.0	20.0	46.7	66.7
76/07/17	01:20	1.8	150.00	25.0	194.	0.0	0.0	0.0	33.4	33.4
76/07/17	04:26	2.1	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/19	08:20	1.5	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/19	11:10	1.1	150.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	14:01	1.2	152.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/19	16:55	1.8	220.00	25.0	215.	0.0	0.0	13.6	0.0	13.6
76/07/19	20:40	1.9	150.00	25.0	217.	0.0	0.0	20.0	6.7	26.7
76/07/19	23:35	1.4	150.00	25.0	210.	0.0	0.0	26.7	13.4	40.1
76/07/20	02:45	1.3	150.00	25.0	194.	0.0	0.0	26.7	6.7	33.4
76/07/20	06:00	2.8	150.00	25.0	200.	0.0	0.0	13.3	0.0	13.3
76/07/21	08:12	1.8	150.00	25.0	221.	0.0	0.0	6.7	0.0	6.7
76/07/21	11:05	1.5	150.00	25.0	219.	0.0	0.0	0.0	0.0	0.0
76/07/21	13:50	1.1	150.00	25.0	218.	0.0	0.0	13.3	0.0	13.3
76/07/21	16:35	1.5	150.00	25.0	218.	0.0	0.0	13.3	0.0	13.3
76/07/21	19:34	2.0	150.00	25.0	228.	0.0	0.0	6.7	13.3	20.0
76/07/21	22:20	1.9	150.00	25.0	222.	0.0	0.0	33.3	86.7	120.0
76/07/22	01:20	1.4	150.00	25.0	226.	0.0	0.0	20.0	86.7	106.7

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/22	04:20	1.2	150.00	25.0	125.	0.0	0.0	20.0	26.7	46.7
76/07/23	08:20	1.8	150.00	25.0	218.	0.0	0.0	20.0	0.0	20.0
76/07/23	11:08	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/23	13:51	1.3	150.00	25.0	181.	0.0	0.0	13.3	0.0	13.3
76/07/23	17:45	1.4	150.00	25.0	178.	0.0	0.0	0.0	0.0	0.0
76/07/23	19:50	1.9	150.00	25.0	183.	0.0	0.0	26.7	0.0	26.7
76/07/23	22:40	2.3	150.00	25.0	185.	0.0	0.0	13.3	0.0	13.3
76/07/24	05:00	1.3	150.00	25.0	195.	0.0	0.0	20.0	6.7	26.7
76/07/26	08:20	1.4	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/26	11:08	2.0	150.00	25.0	208.	0.0	0.0	0.0	0.0	0.0
76/07/26	13:52	1.8	150.00	25.0	209.	0.0	0.0	0.0	0.0	0.0
76/07/26	16:45	1.6	150.00	25.0	206.	0.0	0.0	6.7	0.0	6.7
76/07/26	19:50	1.4	150.00	25.0	201.	0.0	0.0	26.7	0.0	26.7
76/07/26	22:40	2.2	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	00:05	2.3	150.00	25.0	207.	0.0	0.0	0.0	40.0	40.0
76/07/27	04:10	1.6	150.00	25.0	165.	0.0	0.0	6.7	13.3	20.0
76/07/27	07:11	1.2	150.00	25.0	160.	0.0	0.0	0.0	0.0	0.0
76/07/28	08:20	1.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	11:06	2.0	150.00	25.0	199.	0.0	0.0	0.0	0.0	0.0
76/07/28	13:46	2.2	150.00	25.0	206.	0.0	0.0	13.3	0.0	13.3
76/07/28	16:30	1.6	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/28	19:30	1.2	160.00	25.0	200.	0.0	0.0	0.0	6.2	6.2
76/07/28	22:35	1.9	150.00	25.0	204.	0.0	0.0	0.0	6.7	6.7
76/07/29	01:30	2.3	150.00	25.0	204.	0.0	0.0	0.0	13.3	13.3
76/07/29	04:20	2.2	150.00	25.0	159.	0.0	0.0	0.0	26.7	26.7
76/07/29	07:06	1.4	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/30	08:20	1.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	11:13	1.5	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	13:53	2.2	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	17:50	2.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/30	19:40	1.5	150.00	25.0	190.	0.0	0.0	0.0	26.7	26.7
76/07/30	22:35	1.4	150.00	25.0	180.	0.0	0.0	0.0	100.0	100.0
76/07/31	01:20	2.1	150.00	25.0	180.	0.0	0.0	13.3	0.0	13.3
76/07/31	03:55	2.3	150.00	25.0	180.	0.0	0.0	6.7	26.7	33.4
76/08/03	08:12	1.8	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:00	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	13:45	1.1	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	16:40	1.9	150.00	25.0	240.	0.0	0.0	13.3	0.0	13.3
76/08/03	19:40	2.2	150.00	25.0	190.	0.0	0.0	6.7	6.7	13.4
76/08/03	22:10	1.7	150.00	25.0	185.	0.0	0.0	6.7	0.0	6.7
76/08/04	00:20	1.3	150.00	25.0	170.	0.0	0.0	0.0	13.3	13.3
76/08/04	04:15	1.5	150.00	25.0	180.	0.0	0.0	6.7	13.3	20.0
76/08/04	06:51	2.0	150.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/08/05	08:05	2.0	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	10:55	1.8	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	13:50	1.2	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:40	1.5	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	19:25	2.1	150.00	25.0	260.	0.0	0.0	6.7	0.0	6.7
76/08/05	22:10	2.3	150.00	26.0	240.	0.0	0.0	13.3	0.0	13.3
76/08/05	00:55	1.8	150.00	25.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/06	03:21	1.4	150.00	25.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/06	06:02	1.7	150.00	25.0	240.	0.0	0.0	6.7	0.0	6.7
76/08/10	08:20	1.3	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/10	11:13	2.1	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	14:08	1.9	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	17:05	1.4	150.00	23.5	260.	0.0	0.0	6.7	0.0	6.7
76/08/10	19:52	1.2	160.00	23.5	260.	0.0	0.0	0.0	25.0	25.0
76/08/10	22:57	2.0	170.00	23.5	250.	0.0	0.0	0.0	17.6	17.6
76/08/11	02:05	2.3	150.00	23.5	240.	0.0	0.0	0.0	6.7	6.7
76/08/11	05:00	1.7	150.00	23.5	240.	0.0	0.0	0.0	6.7	6.7

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/11	07;45	-9.9	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	08;20	1.3	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	11;07	1.8	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	13;48	2.1	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	16;41	1.8	150.00	24.0	250.	0.0	0.0	0.0	6.7	6.7
76/08/12	19;35	1.3	150.00	24.0	250.	0.0	0.0	6.7	13.3	20.0
76/08/12	22;30	1.6	150.00	23.5	250.	0.0	0.0	0.0	20.0	20.0
76/08/13	00;10	1.6	150.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/13	03:45	-9.9	150.00	23.5	230.	0.0	0.0	0.0	0.0	0.0
76/08/13	06;30	1.6	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	08;20	1.4	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	11:18	1.1	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	14:00	1.6	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	16;42	1.9	150.00	24.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/17	19;35	1.9	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	22;20	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/18	00:35	1.1	150.00	23.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/18	03:08	1.7	150.00	23.0	240.	0.0	0.0	0.0	13.4	13.4
76/08/18	05:20	1.7	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	08:20	1.9	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/19	11:15	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	14:03	1.4	151.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	16;35	1.9	152.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	19;27	2.2	152.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/19	22:20	2.0	159.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/20	01:16	1.6	150.00	24.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/20	04:10	1.5	150.00	23.0	230.	0.0	0.0	0.0	6.7	6.7
76/08/20	06:55	1.9	150.00	23.0	230.	0.0	0.0	0.0	0.0	0.0
76/08/24	08:20	1.5	150.00	22.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/24	11:02	2.0	150.00	22.0	260.	0.0	0.0	0.0	0.0	0.0

CLUPEIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/24	13:50	1.8	150.00	22.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/24	16:30	1.3	153.00	23.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/24	19:17	1.3	159.00	23.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/24	22:00	2.1	150.00	23.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/25	00:48	1.9	150.00	24.0	250.	0.0	0.0	0.0	13.4	13.4
76/08/25	03:32	1.7	150.00	24.0	220.	0.0	0.0	0.0	13.4	13.4
76/08/25	06:25	1.2	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/26	08:15	1.1	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/26	10:57	2.0	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/26	13:39	2.2	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/26	16:30	1.6	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/26	19:15	1.2	150.00	25.0	260.	0.0	0.0	0.0	6.7	6.7
76/08/26	22:10	1.9	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/27	01:05	2.3	150.00	24.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/27	03:51	2.1	150.00	24.5	230.	0.0	0.0	0.0	6.7	6.7
76/08/27	06:50	1.4	150.00	25.0	270.	0.0	0.0	0.0	0.0	0.0
76/08/30	08:50	1.2	150.00	22.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	11:41	1.2	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	14:22	1.7	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	17:11	2.1	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	19:49	1.6	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	22:59	1.4	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/31	02:10	1.7	150.00	23.0	460.	0.0	0.0	0.0	0.0	0.0
76/08/31	05:04	2.0	150.00	22.5	465.	0.0	0.0	0.0	0.0	0.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M.) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/30	06:35	1.3	129.71	6.5	172.	0.0	0.0	0.0	0.0	0.0
76/04/01	11:30	2.5	129.71	9.1	177.	0.0	0.0	0.0	0.0	0.0
76/04/01	14:35	2.3	129.71	8.4	174.	0.0	0.0	0.0	0.0	0.0
76/04/01	17:40	1.7	129.71	7.6	166.	0.0	0.0	0.0	0.0	0.0
76/04/01	20:45	1.8	129.71	7.9	158.	0.0	0.0	0.0	0.0	0.0
76/04/01	23:50	2.4	129.71	7.9	169.	0.0	0.0	0.0	0.0	0.0
76/04/02	03:00	2.3	129.71	7.0	137.	0.0	0.0	0.0	7.7	7.7
76/04/02	06:05	1.8	129.71	7.0	149.	0.0	0.0	0.0	0.0	0.0
76/04/08	11:47	1.5	129.71	7.0	117.	0.0	0.0	0.0	0.0	0.0
76/04/08	17:51	1.9	136.20	7.0	118.	0.0	0.0	0.0	0.0	0.0
76/04/09	03:10	1.5	159.25	7.0	106.	18.8	0.0	0.0	0.0	0.0
76/04/09	06:20	1.9	159.25	7.0	114.	0.0	0.0	0.0	0.0	0.0
76/04/15	08:25	1.4	129.71	9.0	110.	0.0	0.0	0.0	0.0	0.0
76/04/15	11:26	2.2	129.71	9.0	118.	0.0	0.0	0.0	0.0	0.0
76/04/15	17:28	1.1	129.71	9.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/15	20:35	1.6	129.71	8.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/15	23:40	2.3	145.16	8.0	100.	0.0	0.0	0.0	0.0	0.0
76/04/16	02:43	2.0	129.71	8.0	94.	0.0	0.0	0.0	0.0	0.0
76/04/16	05:48	1.3	129.71	9.0	94.	0.0	0.0	0.0	7.7	7.7
76/04/19	08:40	1.3	145.16	9.0	125.	0.0	0.0	0.0	0.0	0.0
76/04/20	00:00	1.4	129.71	9.0	123.	7.7	0.0	0.0	0.0	0.0
76/04/20	03:05	2.0	129.71	9.0	121.	0.0	0.0	0.0	7.7	7.7
76/04/20	06:10	2.0	129.71	9.0	120.	0.0	0.0	0.0	0.0	0.0
76/04/22	09:55	1.5	159.25	10.5	132.	0.0	0.0	0.0	0.0	0.0
76/04/22	13:05	1.3	192.49	12.0	132.	0.0	0.0	0.0	0.0	0.0
76/04/22	16:13	1.7	192.49	12.0	138.	0.0	0.0	0.0	0.0	0.0
76/04/22	19:28	2.1	192.49	12.5	144.	0.0	0.0	0.0	0.0	0.0
76/04/22	22:30	1.7	159.25	11.0	141.	0.0	0.0	0.0	0.0	0.0
76/04/23	05:34	2.0	159.25	11.0	134.	6.3	0.0	0.0	0.0	0.0
76/04/23	08:45	2.0	145.16	11.5	150.	0.0	0.0	0.0	0.0	0.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/29	08:25	1.4	159.25	13.0	132.	0.0	0.0	0.0	0.0	0.0
76/04/29	14:27	1.8	159.25	14.0	146.	6.3	0.0	0.0	0.0	0.0
76/04/29	17:28	1.2	159.25	14.0	155.	0.0	0.0	0.0	0.0	0.0
76/04/29	20:30	1.4	159.25	14.0	151.	0.0	0.0	0.0	0.0	0.0
76/04/29	23:32	2.0	159.25	14.0	149.	0.0	0.0	0.0	18.8	18.8
76/04/30	02:34	2.0	159.25	14.0	135.	6.3	0.0	0.0	0.0	0.0
76/04/30	05:37	1.5	159.25	14.0	130.	0.0	0.0	0.0	0.0	0.0
76/05/03	08:25	1.5	159.25	13.5	151.	6.3	0.0	0.0	0.0	0.0
76/05/03	11:40	1.5	151.00	13.5	149.	0.0	0.0	0.0	0.0	0.0
76/05/03	14:16	2.0	150.00	15.0	155.	0.0	6.7	0.0	0.0	6.7
76/05/03	16:47	1.9	152.00	14.0	152.	19.7	0.0	26.3	0.0	26.3
76/05/03	19:30	1.4	150.00	14.0	151.	13.3	0.0	6.7	0.0	6.7
76/05/03	22:15	1.2	150.00	13.0	131.	13.3	13.3	0.0	0.0	13.3
76/05/04	00:59	1.9	150.00	13.0	128.	0.0	80.0	13.3	0.0	93.3
76/05/04	03:32	2.0	150.00	13.0	129.	0.0	0.0	46.7	0.0	46.7
76/05/04	06:10	1.8	150.00	13.0	129.	13.3	0.0	0.0	0.0	0.0
76/05/05	08:30	1.4	150.00	13.0	153.	33.3	0.0	0.0	0.0	0.0
76/05/05	11:14	1.2	150.00	13.0	158.	0.0	0.0	0.0	0.0	0.0
76/05/05	14:00	1.6	150.00	14.0	165.	53.3	0.0	0.0	0.0	0.0
76/05/05	16:44	1.7	150.00	15.0	165.	20.0	0.0	0.0	0.0	0.0
76/05/05	19:23	1.8	152.00	14.0	158.	6.6	0.0	0.0	0.0	0.0
76/05/05	22:21	1.4	150.00	13.0	159.	33.3	0.0	0.0	0.0	0.0
76/05/06	01:10	1.5	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/06	03:48	2.0	150.00	13.0	138.	0.0	0.0	0.0	0.0	0.0
76/05/06	06:25	2.0	150.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/07	08:15	1.6	150.00	13.0	174.	6.7	0.0	0.0	0.0	0.0
76/05/07	11:00	1.3	150.00	13.0	174.	26.7	0.0	0.0	0.0	0.0
76/05/07	13:45	1.1	150.00	13.0	175.	13.3	0.0	0.0	0.0	0.0
76/05/07	16:16	1.4	150.00	14.0	178.	13.3	0.0	20.0	0.0	20.0
76/05/07	18:56	2.0	150.00	14.0	185.	13.3	0.0	13.3	0.0	13.3

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	26.7	6.7	6.7	0.0	13.4
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	40.0	0.0	40.0
76/05/10	11:00	1.9	150.00	14.0	167.	13.3	0.0	53.3	0.0	53.3
76/05/10	13:50	1.3	150.00	14.0	164.	40.0	0.0	0.0	0.0	0.0
76/05/10	17:15	1.2	150.00	13.0	147.	53.3	6.7	6.7	0.0	13.4
76/05/10	20:55	2.2	150.00	13.0	152.	20.0	0.0	13.3	0.0	13.3
76/05/10	23:46	2.1	150.00	14.0	146.	66.7	6.7	6.7	0.0	13.4
76/05/11	02:50	1.4	150.00	13.5	129.	106.7	0.0	6.7	0.0	6.7
76/05/11	05:30	1.2	150.00	13.0	126.	26.7	20.0	6.7	0.0	26.7
76/05/12	11:30	2.1	150.00	14.0	147.	20.0	0.0	46.7	0.0	46.7
76/05/12	14:05	1.5	150.00	14.0	146.	40.0	33.3	26.6	0.0	59.9
76/05/12	17:00	1.2	150.00	14.0	146.	73.3	0.0	26.7	0.0	26.7
76/05/12	19:48	1.5	150.00	14.0	143.	106.7	6.7	40.0	0.0	46.7
76/05/12	22:30	2.1	150.00	14.0	149.	26.7	20.0	6.7	0.0	26.7
76/05/13	01:22	1.9	90.00	14.0	135.	33.3	22.2	33.3	0.0	55.5
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	13.3	113.3	0.0	126.6
76/05/14	11:20	1.9	150.00	15.0	143.	100.0	0.0	26.7	0.0	26.7
76/05/14	14:10	2.0	150.00	15.0	141.	113.3	0.0	6.7	0.0	6.7
76/05/14	17:00	1.4	150.00	15.0	142.	106.7	0.0	13.4	0.0	13.4
76/05/14	19:50	1.0	150.00	15.0	142.	53.3	0.0	26.7	0.0	26.7
76/05/14	22:45	2.0	150.00	15.0	142.	66.7	0.0	0.0	0.0	0.0
76/05/15	01:40	2.4	150.00	14.5	131.	66.7	0.0	0.0	0.0	0.0
76/05/15	04:10	1.9	155.00	15.0	132.	212.9	0.0	0.0	0.0	0.0
76/05/15	07:10	1.3	150.00	14.5	131.	46.7	6.7	0.0	0.0	6.7
76/05/17	08:33	1.4	150.00	15.0	145.	260.0	13.3	0.0	0.0	13.3
76/05/17	11:16	1.3	150.00	15.0	149.	146.7	0.0	0.0	0.0	0.0
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	0.0	6.7	0.0	6.7
76/05/17	16:30	2.2	150.00	17.0	153.	73.3	20.0	26.7	0.0	46.7

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	180.0	6.7	26.7	0.0	33.4
76/05/17	22:12	1.3	150.00	16.0	150.	60.0	13.3	46.7	0.0	60.0
76/05/18	00:55	1.9	150.00	15.5	138.	280.0	40.0	40.0	0.0	80.0
76/05/18	03:40	2.4	150.00	16.0	137.	60.0	6.7	40.0	0.0	46.7
76/05/18	06:29	2.0	150.00	16.0	140.	433.3	20.0	20.0	0.0	40.0
76/05/19	08:40	1.5	150.00	15.0	148.	220.0	0.0	40.0	0.0	40.0
76/05/19	11:25	1.2	150.00	15.0	152.	113.3	0.0	53.3	0.0	53.3
76/05/19	14:28	1.3	150.00	15.0	156.	26.7	0.0	53.4	0.0	53.4
76/05/19	17:23	1.8	150.00	15.0	154.	26.7	0.0	20.0	0.0	20.0
76/05/19	20:23	1.5	150.00	16.0	160.	46.7	0.0	66.7	0.0	66.7
76/05/19	23:36	1.2	150.00	15.0	153.	33.3	6.7	6.7	0.0	13.4
76/05/20	02:28	1.5	150.00	15.0	141.	6.7	26.7	113.3	0.0	140.0
76/05/20	05:13	1.8	150.00	15.0	145.	33.3	13.3	366.6	0.0	379.9
76/05/21	08:20	2.1	150.00	15.0	147.	33.3	0.0	120.0	0.0	120.0
76/05/21	11:20	1.6	150.00	16.0	152.	160.0	0.0	6.7	0.0	6.7
76/05/21	14:17	1.4	150.00	16.0	164.	20.0	6.7	80.0	0.0	86.7
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	33.4	126.7	0.0	160.1
76/05/21	20:00	2.6	150.00	15.0	152.	13.3	0.0	20.0	0.0	20.0
76/05/21	23:00	1.7	150.00	15.0	149.	53.3	13.3	53.3	0.0	66.6
76/05/22	01:50	1.5	150.00	15.0	132.	13.3	26.7	26.7	0.0	53.4
76/05/22	04:37	1.7	150.00	15.0	128.	33.3	6.7	146.7	0.0	153.4
76/05/24	08:10	1.8	150.00	14.0	150.	40.0	20.0	13.3	0.0	33.3
76/05/24	10:42	1.8	150.00	15.0	151.	40.0	0.0	0.0	0.0	0.0
76/05/24	13:20	1.5	150.00	15.0	152.	73.3	0.0	0.0	0.0	0.0
76/05/24	16:05	1.3	153.00	14.0	150.	26.1	0.0	6.5	0.0	6.5
76/05/24	19:10	1.9	155.00	14.0	148.	58.1	0.0	0.0	0.0	0.0
76/05/24	21:48	2.2	150.00	15.0	151.	20.0	0.0	0.0	0.0	0.0
76/05/25	01:05	1.8	150.00	14.0	136.	33.3	0.0	0.0	6.7	6.7
76/05/25	04:05	1.4	150.00	14.0	132.	60.0	0.0	6.7	0.0	6.7
76/05/26	08:04	1.8	150.00	14.0	140.	26.7	0.0	0.0	0.0	0.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	60.0	6.7	0.0	0.0	6.7
76/05/26	13:34	1.8	151.00	14.0	141.	66.2	0.0	6.6	0.0	6.6
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	0.0	6.6	0.0	6.6
76/05/26	19:50	1.7	100.00	14.0	133.	70.0	0.0	0.0	0.0	0.0
76/05/26	21:40	2.3	150.00	14.0	135.	6.7	0.0	13.3	0.0	13.3
76/05/27	02:10	1.8	150.00	14.0	124.	53.3	0.0	6.7	0.0	6.7
76/05/27	05:00	1.3	150.00	13.0	123.	40.0	0.0	6.7	0.0	6.7
76/05/28	08:06	1.5	150.00	14.0	160.	26.7	0.0	0.0	0.0	0.0
76/05/28	10:50	1.8	150.00	14.0	170.	20.0	0.0	0.0	0.0	0.0
76/05/28	13:45	1.8	150.00	14.0	158.	73.3	0.0	0.0	0.0	0.0
76/05/28	16:45	1.2	150.00	14.5	162.	106.7	0.0	0.0	0.0	0.0
76/05/28	19:53	1.4	156.00	14.8	155.	185.9	0.0	12.8	0.0	12.8
76/05/28	23:08	2.2	150.00	14.0	150.	40.0	0.0	0.0	0.0	0.0
76/05/29	01:57	2.1	150.00	14.0	155.	126.7	0.0	6.7	0.0	6.7
76/05/29	04:55	1.5	150.00	14.0	165.	193.3	0.0	0.0	0.0	0.0
76/06/01	03:10	2.3	150.00	14.0	140.	106.7	0.0	20.0	0.0	20.0
76/06/01	06:20	1.6	150.00	14.0	150.	300.0	0.0	13.3	0.0	13.3
76/06/01	09:35	1.3	150.00	15.0	153.	146.7	0.0	13.3	0.0	13.3
76/06/01	12:18	1.7	150.00	15.0	171.	133.3	0.0	0.0	0.0	0.0
76/06/01	15:04	2.1	149.00	15.0	178.	53.7	0.0	20.1	0.0	20.1
76/06/01	22:25	1.3	159.00	15.0	246.	62.9	0.0	0.0	0.0	0.0
76/06/02	08:08	1.4	150.00	15.0	-9999.	173.3	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	33.3	0.0	13.4	0.0	13.4
76/06/02	13:23	1.9	150.00	15.0	173.	180.0	0.0	20.0	0.0	20.0
76/06/02	17:15	2.1	150.00	15.0	169.	186.7	0.0	33.4	0.0	33.4
76/06/02	20:04	1.6	150.00	15.0	155.	413.3	0.0	13.3	0.0	13.3
76/06/03	00:25	1.9	150.00	15.0	144.	133.3	0.0	0.0	0.0	0.0
76/06/03	03:15	2.3	150.00	15.0	141.	120.0	0.0	86.7	0.0	86.7
76/06/03	06:00	2.0	150.00	15.0	144.	300.0	0.0	46.7	0.0	46.7
76/06/04	08:53	1.5	150.00	15.0	155.	386.7	0.0	13.3	0.0	13.3

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	146.7	0.0	33.3	0.0	33.3
76/06/04	14:15	1.5	151.00	16.0	154.	178.8	0.0	0.0	0.0	0.0
76/06/04	17:50	2.0	150.00	16.5	160.	173.3	6.7	13.3	0.0	20.0
76/06/04	19:58	1.7	151.00	16.0	150.	298.0	0.0	33.1	0.0	33.1
76/06/04	22:12	1.3	150.00	16.0	149.	506.7	0.0	73.3	0.0	73.3
76/06/05	01:00	1.3	150.00	16.0	140.	20.0	0.0	26.7	0.0	26.7
76/06/05	03:50	1.9	150.00	16.0	137.	180.0	0.0	33.3	0.0	33.3
76/06/07	08:15	2.0	150.00	16.0	154.	53.3	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	126.7	0.0	20.0	0.0	20.0
76/06/07	13:20	1.0	150.00	17.0	163.	13.3	0.0	6.7	0.0	6.7
76/06/07	15:55	1.0	148.00	17.0	161.	40.5	0.0	74.3	0.0	74.3
76/06/07	18:35	1.8	150.00	17.5	162.	126.7	0.0	80.0	0.0	80.0
76/06/07	21:05	2.0	150.00	17.0	155.	46.7	0.0	0.0	0.0	0.0
76/06/07	23:55	1.4	150.00	18.0	145.	306.7	0.0	33.4	0.0	33.4
76/06/08	02:40	1.2	150.00	17.0	137.	46.7	6.7	46.7	0.0	53.4
76/06/08	05:25	1.5	150.00	17.0	136.	86.7	0.0	60.0	0.0	60.0
76/06/09	08:12	1.9	150.00	17.0	158.	73.3	0.0	33.3	0.0	33.3
76/06/09	10:56	2.0	150.00	18.0	164.	120.0	0.0	33.3	0.0	33.3
76/06/09	13:48	1.4	127.00	18.0	161.	189.0	0.0	63.0	0.0	63.0
76/06/09	17:25	1.1	150.00	18.0	157.	46.7	0.0	20.0	0.0	20.0
76/06/09	20:05	2.1	155.00	18.0	160.	96.8	0.0	25.8	0.0	25.8
76/06/09	23:00	2.3	150.00	18.5	164.	20.0	6.7	6.7	0.0	13.4
76/06/10	02:45	1.7	150.00	18.0	147.	226.7	6.7	26.6	0.0	33.3
76/06/10	04:30	1.3	150.00	18.0	141.	33.3	0.0	6.7	0.0	6.7
76/06/11	08:10	1.4	150.00	18.0	150.	113.3	0.0	0.0	0.0	0.0
76/06/11	10:49	2.1	150.00	19.0	150.	46.7	0.0	33.3	0.0	33.3
76/06/11	13:32	1.8	150.00	19.0	150.	146.7	0.0	139.9	0.0	139.9
76/06/11	16:11	1.3	150.00	19.0	150.	133.3	0.0	166.7	0.0	166.7
76/06/11	19:20	1.3	150.00	19.0	150.	106.7	0.0	66.7	0.0	66.7
76/06/11	22:58	2.0	150.00	18.5	150.	73.3	0.0	26.7	0.0	26.7

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	20.0	0.0	140.0	0.0	140.0
76/06/12	03:45	1.8	150.00	19.0	150.	193.3	0.0	46.7	0.0	46.7
76/06/14	08:15	1.3	150.00	19.0	150.	33.3	0.0	173.3	0.0	173.3
76/06/14	10:59	1.5	150.00	19.0	150.	20.0	0.0	153.3	0.0	153.3
76/06/14	13:39	2.0	150.00	19.0	150.	46.7	0.0	153.4	0.0	153.4
76/06/14	17:35	1.9	150.00	20.0	157.	93.3	0.0	386.6	0.0	386.6
76/06/14	20:56	1.3	150.00	20.0	156.	80.0	0.0	206.6	0.0	206.6
76/06/14	23:48	1.8	150.00	20.0	148.	193.3	13.3	200.0	0.0	213.3
76/06/15	02:30	2.2	150.00	20.0	143.	26.7	0.0	33.3	0.0	33.3
76/06/15	05:15	1.8	150.00	20.0	144.	146.7	0.0	139.9	0.0	139.9
76/06/16	08:10	1.3	150.00	20.0	166.	106.7	0.0	173.3	0.0	173.3
76/06/16	10:52	1.2	150.00	20.0	171.	53.3	0.0	80.0	0.0	80.0
76/06/16	13:38	1.8	150.00	22.0	175.	133.3	0.0	73.3	0.0	73.3
76/06/16	16:20	2.0	150.00	23.0	178.	60.0	0.0	186.7	0.0	186.7
76/06/16	19:03	1.8	150.00	21.0	174.	186.7	0.0	126.7	0.0	126.7
76/06/16	23:10	1.4	150.00	21.0	165.	46.7	0.0	13.3	0.0	13.3
76/06/17	02:05	2.0	150.00	21.0	168.	93.3	0.0	366.7	0.0	366.7
76/06/17	04:55	2.1	150.00	21.0	206.	26.7	0.0	80.1	0.0	80.1
76/06/18	08:20	1.5	150.00	21.0	150.	153.3	0.0	126.7	0.0	126.7
76/06/18	11:09	1.1	150.00	21.0	150.	26.7	0.0	46.7	0.0	46.7
76/06/18	13:51	1.4	151.00	21.0	150.	33.1	0.0	152.3	0.0	152.3
76/06/18	16:40	1.9	152.00	22.0	150.	65.8	6.6	164.4	0.0	171.0
76/06/18	22:25	1.4	150.00	22.0	150.	93.3	0.0	340.1	0.0	340.1
76/06/19	01:15	1.4	150.00	22.0	150.	53.3	0.0	486.7	0.0	486.7
76/06/19	04:10	1.9	150.00	22.0	150.	26.7	0.0	260.0	0.0	260.0
76/06/21	08:15	1.8	150.00	23.0	155.	6.7	0.0	626.7	0.0	626.7
76/06/21	11:01	1.5	150.00	22.0	155.	13.3	0.0	480.0	0.0	480.0
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	137.7	0.0	137.7
76/06/21	16:50	1.5	157.00	23.0	182.	12.7	0.0	223.0	0.0	223.0
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	0.0	260.1	0.0	260.1

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	286.7	0.0	286.7
76/06/22	01:20	1.5	150.00	22.0	164.	13.3	0.0	286.6	0.0	286.6
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	533.3	0.0	533.3
76/06/23	08:15	1.8	150.00	23.0	180.	6.7	0.0	453.4	0.0	453.4
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	333.3	0.0	333.3
76/06/23	13:46	1.3	150.00	23.0	174.	6.7	0.0	206.7	0.0	206.7
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	174.9	0.0	174.9
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	0.0	714.3	0.0	714.3
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	1146.7	0.0	1146.7
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	0.0	480.0	0.0	480.0
76/06/25	08:20	1.6	150.00	24.0	160.	0.0	0.0	200.0	0.0	200.0
76/06/25	11:11	1.9	150.00	24.0	160.	0.0	0.0	193.4	0.0	193.4
76/06/25	13:51	1.6	150.00	24.0	160.	6.7	0.0	353.4	0.0	353.4
76/06/25	16:45	1.3	154.00	24.0	188.	13.0	0.0	402.6	0.0	402.6
76/06/25	22:20	2.2	150.00	24.0	185.	0.0	0.0	820.0	0.0	820.0
76/06/26	01:30	2.0	150.00	24.0	168.	6.7	0.0	506.6	0.0	506.6
76/06/26	04:23	1.5	150.00	24.0	170.	13.3	0.0	553.4	0.0	553.4
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	146.6	0.0	146.6
76/06/28	20:55	1.3	150.00	25.0	147.	13.3	0.0	226.7	0.0	226.7
76/06/28	23:45	2.2	150.00	25.0	194.	6.7	0.0	146.7	0.0	146.7
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	0.0	66.6	0.0	66.6
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	60.0	0.0	60.0
76/06/30	11:11	1.7	150.00	26.0	227.	13.3	0.0	60.0	0.0	60.0
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	33.3	0.0	33.3
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	0.0	418.7	0.0	418.7
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	46.7	0.0	46.7
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	6.7	120.1	0.0	126.8
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	69.5	0.0	69.5
76/07/01	05:23	2.1	150.00	25.0	-9999.	0.0	0.0	653.4	0.0	653.4
76/07/02	08:20	1.5	150.00	25.0	229.	13.3	0.0	40.0	0.0	40.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	0.0	0.0	86.7	0.0	86.7
76/07/02	13:51	2.0	159.00	26.0	237.	6.3	0.0	44.0	0.0	44.0
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	181.2	0.0	181.2
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	106.7	0.0	106.7
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	157.3	0.0	157.3
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	120.0	0.0	120.0
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	0.0	46.6	0.0	46.6
76/07/07	08:19	2.0	150.00	26.0	251.	0.0	0.0	6.7	0.0	6.7
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	46.7	0.0	46.7
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	6.7	0.0	6.7
76/07/07	17:00	1.4	187.00	26.0	223.	0.0	0.0	21.4	10.7	32.1
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	53.3	0.0	53.3
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	100.0	60.0	160.0
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	6.7	26.7	33.4
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	26.6	0.0	26.6
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	0.0	0.0	13.4	0.0	13.4
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	0.0	6.7	6.7
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	13.3	6.7	20.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	19.1	31.8	50.9
76/07/09	22:40	2.2	150.00	26.5	251.	0.0	0.0	0.0	26.7	26.7
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	6.7	13.4	20.1
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	0.0	0.0	6.7	6.7	13.4
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	6.7	73.3	80.0
76/07/13	01:00	2.2	150.00	25.5	216.	0.0	0.0	0.0	66.7	66.7
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	20.0	20.0	40.0
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	6.7	6.7
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/14	11:11	1.6	150.00	25.0	218.	0.0	0.0	13.3	6.7	20.0
76/07/14	13:53	2.1	151.00	25.0	214.	0.0	0.0	0.0	33.1	33.1
76/07/14	16:45	2.0	159.00	25.0	227.	0.0	0.0	37.7	0.0	37.7
76/07/14	20:12	1.3	156.00	25.0	221.	0.0	0.0	12.8	12.8	25.6
76/07/14	23:30	1.8	150.00	25.0	213.	0.0	0.0	0.0	20.0	20.0
76/07/15	02:30	2.3	150.00	25.0	203.	0.0	0.0	6.7	0.0	6.7
76/07/15	05:25	1.8	150.00	25.0	125.	0.0	0.0	6.7	6.7	13.4
76/07/16	08:20	1.4	150.00	25.0	225.	0.0	0.0	0.0	0.0	0.0
76/07/16	11:08	1.3	150.00	25.0	220.	0.0	0.0	0.0	13.3	13.3
76/07/16	13:46	1.9	150.00	25.0	222.	0.0	0.0	0.0	0.0	0.0
76/07/16	16:45	2.2	150.00	25.0	227.	0.0	0.0	0.0	20.0	20.0
76/07/16	19:27	1.9	150.00	25.0	220.	0.0	0.0	0.0	20.0	20.0
76/07/16	22:25	1.4	150.00	25.0	216.	0.0	0.0	0.0	13.3	13.3
76/07/17	01:20	1.8	150.00	25.0	194.	0.0	0.0	0.0	40.0	40.0
76/07/17	04:26	2.1	150.00	25.0	200.	0.0	0.0	0.0	20.0	20.0
76/07/19	08:20	1.5	150.00	25.0	220.	0.0	0.0	0.0	20.0	20.0
76/07/19	11:10	1.1	150.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	14:01	1.2	152.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/19	16:55	1.8	220.00	25.0	215.	0.0	0.0	4.5	9.1	13.6
76/07/19	20:40	1.9	150.00	25.0	217.	0.0	0.0	13.4	33.3	46.7
76/07/19	23:35	1.4	150.00	25.0	210.	0.0	0.0	0.0	46.7	46.7
76/07/20	02:45	1.3	150.00	25.0	194.	0.0	0.0	13.4	80.0	93.4
76/07/20	06:00	2.8	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/21	08:12	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/21	11:05	1.5	150.00	25.0	219.	0.0	0.0	0.0	0.0	0.0
76/07/21	13:50	1.1	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	16:35	1.5	150.00	25.0	218.	0.0	0.0	0.0	6.7	6.7
76/07/21	19:34	2.0	150.00	25.0	228.	0.0	0.0	0.0	13.3	13.3
76/07/21	22:20	1.9	150.00	25.0	222.	0.0	0.0	0.0	60.0	60.0
76/07/22	01:20	1.4	150.00	25.0	226.	0.0	0.0	0.0	20.0	20.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/22	04:20	1.2	150.00	25.0	125.	0.0	0.0	0.0	13.3	13.3
76/07/23	08:20	1.8	150.00	25.0	218.	0.0	0.0	0.0	6.7	6.7
76/07/23	11:08	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/23	13:51	1.3	150.00	25.0	181.	0.0	0.0	0.0	0.0	0.0
76/07/23	17:45	1.4	150.00	25.0	178.	0.0	0.0	0.0	0.0	0.0
76/07/23	19:50	1.9	150.00	25.0	183.	0.0	0.0	0.0	0.0	0.0
76/07/23	22:40	2.3	150.00	25.0	185.	0.0	0.0	0.0	6.7	6.7
76/07/24	05:00	1.3	150.00	25.0	195.	0.0	0.0	0.0	13.3	13.3
76/07/26	08:20	1.4	150.00	25.0	203.	0.0	0.0	0.0	6.7	6.7
76/07/26	11:08	2.0	150.00	25.0	208.	0.0	0.0	0.0	0.0	0.0
76/07/26	13:52	1.8	150.00	25.0	209.	0.0	0.0	0.0	0.0	0.0
76/07/26	16:45	1.6	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/26	19:50	1.4	150.00	25.0	201.	0.0	0.0	0.0	20.0	20.0
76/07/26	22:40	2.2	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	00:05	2.3	150.00	25.0	207.	0.0	0.0	0.0	26.7	26.7
76/07/27	04:10	1.6	150.00	25.0	165.	0.0	0.0	0.0	0.0	0.0
76/07/27	07:11	1.2	150.00	25.0	160.	0.0	0.0	0.0	0.0	0.0
76/07/28	08:20	1.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	11:06	2.0	150.00	25.0	199.	0.0	0.0	0.0	0.0	0.0
76/07/28	13:46	2.2	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/28	16:30	1.6	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/28	19:30	1.2	160.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	22:35	1.9	150.00	25.0	204.	0.0	0.0	0.0	6.7	6.7
76/07/29	01:30	2.3	150.00	25.0	204.	0.0	0.0	0.0	0.0	0.0
76/07/29	04:20	2.2	150.00	25.0	159.	0.0	0.0	0.0	0.0	0.0
76/07/29	07:06	1.4	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/30	08:20	1.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	11:13	1.5	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	13:53	2.2	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	17:50	2.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREFS C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/30	19:40	1.5	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	22:35	1.4	150.00	25.0	180.	0.0	0.0	0.0	13.3	13.3
76/07/31	01:20	2.1	150.00	25.0	180.	0.0	0.0	0.0	20.0	20.0
76/07/31	03:55	2.3	150.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/08/03	08:12	1.8	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:00	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	13:45	1.1	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/08/03	16:40	1.9	150.00	25.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/03	19:40	2.2	150.00	25.0	190.	0.0	0.0	0.0	6.7	6.7
76/08/03	22:10	1.7	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:20	1.3	150.00	25.0	170.	0.0	0.0	0.0	0.0	0.0
76/08/04	04:15	1.5	150.00	25.0	180.	0.0	0.0	0.0	6.7	6.7
76/08/04	06:51	2.0	150.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/08/05	08:05	2.0	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	10:55	1.8	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/05	13:50	1.2	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:40	1.5	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	19:25	2.1	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/05	22:10	2.3	150.00	26.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/05	00:55	1.8	150.00	25.0	240.	0.0	0.0	0.0	13.3	13.3
76/08/06	03:21	1.4	150.00	25.0	240.	0.0	0.0	0.0	20.0	20.0
76/08/06	06:02	1.7	150.00	25.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/10	08:20	1.3	150.00	24.0	240.	0.0	0.0	0.0	6.7	6.7
76/08/10	11:13	2.1	150.00	24.0	260.	0.0	0.0	0.0	6.7	6.7
76/08/10	14:08	1.9	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	17:05	1.4	150.00	23.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	19:52	1.2	160.00	23.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/10	22:57	2.0	170.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/11	02:05	2.3	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/11	05:00	1.7	150.00	23.5	240.	0.0	0.0	0.0	13.3	13.3

MORONE GENUS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/11	07:45	-0.9	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	08:20	1.3	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	11:07	1.8	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/12	13:48	2.1	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	16:41	1.8	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	19:35	1.3	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/12	22:30	1.6	150.00	23.5	250.	0.0	0.0	0.0	6.7	6.7
76/08/13	00:10	1.6	150.00	23.5	250.	0.0	0.0	0.0	0.0	0.0
76/08/13	03:45	-0.9	150.00	23.5	230.	0.0	0.0	0.0	0.0	0.0
76/08/13	06:30	1.6	150.00	23.5	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	08:20	1.4	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/17	11:18	1.1	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	14:00	1.6	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/17	16:42	1.9	150.00	24.5	260.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:35	1.9	150.00	24.0	250.	0.0	0.0	0.0	6.7	6.7
76/08/17	22:20	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/18	00:35	1.1	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/18	03:08	1.7	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:20	1.7	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	08:20	1.9	150.00	23.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/19	11:15	1.5	150.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	14:03	1.4	151.00	23.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	16:35	1.9	152.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/19	19:27	2.2	152.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/19	22:20	2.0	159.00	23.5	250.	0.0	0.0	0.0	6.3	6.3
76/08/20	01:16	1.6	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/20	04:10	1.5	150.00	23.0	230.	0.0	0.0	0.0	6.7	6.7
76/08/20	06:55	1.9	150.00	23.0	230.	0.0	0.0	0.0	0.0	0.0
76/08/24	08:20	1.5	150.00	22.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/24	11:02	2.0	150.00	22.0	260.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/07	21:35	1.7	150.00	13.0	176.	0.0	0.0	0.0	0.0	0.0
76/05/08	00:21	1.3	150.00	13.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/08	03:14	1.3	77.00	13.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/10	08:20	2.0	150.00	14.0	168.	0.0	0.0	0.0	0.0	0.0
76/05/10	11:00	1.9	150.00	14.0	167.	0.0	0.0	0.0	0.0	0.0
76/05/10	13:50	1.3	150.00	14.0	164.	0.0	0.0	0.0	0.0	0.0
76/05/10	17:15	1.2	150.00	13.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/10	20:55	2.2	150.00	13.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/10	23:46	2.1	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/11	02:50	1.4	150.00	13.5	129.	0.0	0.0	0.0	0.0	0.0
76/05/11	05:30	1.2	150.00	13.0	126.	0.0	0.0	6.7	0.0	6.7
76/05/12	11:30	2.1	150.00	14.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/12	14:05	1.5	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/12	17:00	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/12	19:48	1.5	150.00	14.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/12	22:30	2.1	150.00	14.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/13	01:22	1.9	90.00	14.0	135.	0.0	0.0	0.0	0.0	0.0
76/05/14	08:35	1.2	150.00	14.0	146.	0.0	0.0	0.0	0.0	0.0
76/05/14	11:20	1.9	150.00	15.0	143.	0.0	0.0	0.0	0.0	0.0
76/05/14	14:10	2.0	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/14	17:00	1.4	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/14	19:50	1.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/14	22:45	2.0	150.00	15.0	142.	0.0	0.0	0.0	0.0	0.0
76/05/15	01:40	2.4	150.00	14.5	131.	0.0	0.0	0.0	0.0	0.0
76/05/15	04:10	1.9	155.00	15.0	132.	0.0	0.0	0.0	0.0	0.0
76/05/15	07:10	1.3	150.00	14.5	131.	0.0	6.7	0.0	0.0	6.7
76/05/17	08:33	1.4	150.00	15.0	145.	0.0	0.0	0.0	0.0	0.0
76/05/17	11:16	1.3	150.00	15.0	149.	0.0	0.0	0.0	0.0	0.0
76/05/17	13:52	2.0	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/17	16:30	2.2	150.00	17.0	153.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/17	19:27	1.5	150.00	16.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/17	22:12	1.3	150.00	16.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/18	00:55	1.9	150.00	15.5	138.	0.0	0.0	0.0	0.0	0.0
76/05/18	03:40	2.4	150.00	16.0	137.	0.0	0.0	0.0	0.0	0.0
76/05/18	06:29	2.0	150.00	16.0	140.	0.0	0.0	0.0	0.0	0.0
76/05/19	08:40	1.5	150.00	15.0	148.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:25	1.2	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/19	14:28	1.3	150.00	15.0	156.	0.0	0.0	0.0	0.0	0.0
76/05/19	17:23	1.8	150.00	15.0	154.	0.0	0.0	0.0	0.0	0.0
76/05/19	20:23	1.5	150.00	16.0	160.	0.0	0.0	0.0	0.0	0.0
76/05/19	23:36	1.2	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/05/20	02:28	1.5	150.00	15.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/20	05:13	1.8	150.00	15.0	145.	0.0	0.0	0.0	0.0	0.0
76/05/21	08:20	2.1	150.00	15.0	147.	0.0	0.0	0.0	0.0	0.0
76/05/21	11:20	1.6	150.00	16.0	152.	0.0	0.0	13.3	0.0	13.3
76/05/21	14:17	1.4	150.00	16.0	164.	0.0	0.0	6.7	0.0	6.7
76/05/21	17:05	2.0	150.00	16.0	159.	0.0	0.0	0.0	0.0	0.0
76/05/21	20:00	2.6	150.00	15.0	152.	0.0	0.0	0.0	0.0	0.0
76/05/21	23:00	1.7	150.00	15.0	149.	0.0	0.0	6.7	0.0	6.7
76/05/22	01:50	1.5	150.00	15.0	132.	0.0	0.0	13.3	0.0	13.3
76/05/22	04:37	1.7	150.00	15.0	128.	0.0	20.0	6.7	0.0	26.7
76/05/24	08:10	1.8	150.00	14.0	150.	0.0	6.7	26.7	0.0	33.4
76/05/24	10:42	1.8	150.00	15.0	151.	0.0	0.0	13.3	0.0	13.3
76/05/24	13:20	1.5	150.00	15.0	152.	0.0	0.0	40.0	0.0	40.0
76/05/24	16:05	1.3	153.00	14.0	150.	0.0	0.0	0.0	0.0	0.0
76/05/24	19:10	1.9	155.00	14.0	148.	0.0	6.5	19.4	0.0	25.9
76/05/24	21:48	2.2	150.00	15.0	151.	0.0	0.0	0.0	0.0	0.0
76/05/25	01:05	1.8	150.00	14.0	136.	0.0	0.0	6.7	0.0	6.7
76/05/25	04:05	1.4	150.00	14.0	132.	0.0	20.0	33.3	0.0	53.3
76/05/26	08:04	1.8	150.00	14.0	140.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M.) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	10:43	2.1	150.00	14.0	133.	0.0	0.0	6.7	0.0	6.7
76/05/26	13:34	1.8	151.00	14.0	141.	0.0	0.0	0.0	0.0	0.0
76/05/26	16:32	1.4	151.00	14.0	139.	0.0	6.6	19.9	0.0	26.5
76/05/26	19:50	1.7	100.00	14.0	133.	0.0	10.0	10.0	0.0	20.0
76/05/26	21:40	2.3	150.00	14.0	135.	0.0	6.7	6.7	0.0	13.4
76/05/27	02:10	1.8	150.00	14.0	124.	0.0	13.3	6.7	0.0	20.0
76/05/27	05:00	1.3	150.00	13.0	123.	0.0	6.7	46.7	0.0	53.4
76/05/28	08:06	1.5	150.00	14.0	160.	0.0	0.0	20.0	0.0	20.0
76/05/28	10:50	1.8	150.00	14.0	170.	0.0	0.0	13.3	0.0	13.3
76/05/28	13:45	1.8	150.00	14.0	158.	0.0	0.0	13.3	0.0	13.3
76/05/28	16:45	1.2	150.00	14.5	162.	0.0	0.0	20.0	0.0	20.0
76/05/28	19:53	1.4	156.00	14.8	155.	0.0	0.0	38.5	0.0	38.5
76/05/28	23:08	2.2	150.00	14.0	150.	0.0	0.0	6.7	0.0	6.7
76/05/29	01:57	2.1	150.00	14.0	155.	0.0	0.0	0.0	0.0	0.0
76/05/29	04:55	1.5	150.00	14.0	165.	0.0	6.7	53.3	0.0	60.0
76/06/01	03:10	2.3	150.00	14.0	140.	0.0	6.7	13.3	0.0	20.0
76/06/01	06:20	1.6	150.00	14.0	150.	0.0	0.0	6.7	0.0	6.7
76/06/01	09:35	1.3	150.00	15.0	153.	0.0	0.0	0.0	0.0	0.0
76/06/01	12:18	1.7	150.00	15.0	171.	0.0	0.0	13.3	0.0	13.3
76/06/01	15:04	2.1	149.00	15.0	178.	0.0	0.0	0.0	0.0	0.0
76/06/01	22:25	1.3	159.00	15.0	246.	0.0	0.0	0.0	0.0	0.0
76/06/02	08:08	1.4	150.00	15.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/02	10:50	1.3	150.00	14.0	171.	0.0	0.0	0.0	0.0	0.0
76/06/02	13:23	1.9	150.00	15.0	173.	0.0	0.0	0.0	0.0	0.0
76/06/02	17:15	2.1	150.00	15.0	169.	0.0	6.7	20.0	0.0	26.7
76/06/02	20:04	1.6	150.00	15.0	155.	0.0	0.0	26.7	0.0	26.7
76/06/03	00:25	1.9	150.00	15.0	144.	6.7	0.0	6.7	0.0	6.7
76/06/03	03:15	2.3	150.00	15.0	141.	0.0	0.0	33.3	0.0	33.3
76/06/03	06:00	2.0	150.00	15.0	144.	0.0	6.7	13.3	0.0	20.0
76/06/04	08:53	1.5	150.00	15.0	155.	0.0	0.0	6.7	0.0	6.7

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/04	11:33	1.2	150.00	15.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/04	14:15	1.5	151.00	16.0	154.	0.0	6.6	26.5	0.0	33.1
76/06/04	17:50	2.0	150.00	16.5	160.	0.0	0.0	13.3	0.0	13.3
76/06/04	19:58	1.7	151.00	16.0	150.	0.0	6.6	19.9	0.0	26.5
76/06/04	22:12	1.3	150.00	16.0	149.	0.0	0.0	26.7	0.0	26.7
76/06/05	01:00	1.3	150.00	16.0	140.	0.0	0.0	0.0	0.0	0.0
76/06/05	03:50	1.9	150.00	16.0	137.	6.7	6.7	20.0	0.0	26.7
76/06/07	08:15	2.0	150.00	16.0	154.	0.0	0.0	0.0	0.0	0.0
76/06/07	10:39	1.5	150.00	16.0	163.	0.0	0.0	0.0	0.0	0.0
76/06/07	13:20	1.0	150.00	17.0	163.	0.0	0.0	6.7	0.0	6.7
76/06/07	15:55	1.0	148.00	17.0	161.	0.0	0.0	0.0	0.0	0.0
76/06/07	18:35	1.8	150.00	17.5	162.	0.0	6.7	26.7	0.0	33.4
76/06/07	21:05	2.0	150.00	17.0	155.	0.0	0.0	6.7	0.0	6.7
76/06/07	23:55	1.4	150.00	18.0	145.	0.0	0.0	46.7	0.0	46.7
76/06/08	02:40	1.2	150.00	17.0	137.	0.0	0.0	0.0	0.0	0.0
76/06/08	05:25	1.5	150.00	17.0	136.	0.0	0.0	0.0	0.0	0.0
76/06/09	08:12	1.9	150.00	17.0	158.	0.0	0.0	0.0	0.0	0.0
76/06/09	10:56	2.0	150.00	18.0	164.	0.0	0.0	0.0	0.0	0.0
76/06/09	13:48	1.4	127.00	18.0	161.	0.0	0.0	7.9	0.0	7.9
76/06/09	17:25	1.1	150.00	18.0	157.	0.0	6.7	6.7	0.0	13.4
76/06/09	20:05	2.1	155.00	18.0	160.	0.0	0.0	12.9	0.0	12.9
76/06/09	23:00	2.3	150.00	18.5	164.	0.0	0.0	0.0	0.0	0.0
76/06/10	02:45	1.7	150.00	18.0	147.	0.0	6.7	6.7	0.0	13.4
76/06/10	04:30	1.3	150.00	18.0	141.	0.0	0.0	6.7	0.0	6.7
76/06/11	08:10	1.4	150.00	18.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	10:49	2.1	150.00	19.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/11	13:32	1.8	150.00	19.0	150.	0.0	20.0	53.3	0.0	73.3
76/06/11	16:11	1.3	150.00	19.0	150.	6.7	13.3	46.7	0.0	60.0
76/06/11	19:20	1.3	150.00	19.0	150.	0.0	33.3	46.7	0.0	80.0
76/06/11	22:58	2.0	150.00	18.5	150.	0.0	13.3	26.7	0.0	40.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/12	00:45	2.4	150.00	19.0	150.	0.0	13.3	40.0	0.0	53.3
76/06/12	03:45	1.8	150.00	19.0	150.	0.0	0.0	26.7	0.0	26.7
76/06/14	08:15	1.3	150.00	19.0	150.	13.3	0.0	20.0	0.0	20.0
76/06/14	10:59	1.5	150.00	19.0	150.	0.0	0.0	13.3	0.0	13.3
76/06/14	13:39	2.0	150.00	19.0	150.	0.0	0.0	40.0	0.0	40.0
76/06/14	17:35	1.9	150.00	20.0	157.	0.0	0.0	46.7	0.0	46.7
76/06/14	20:56	1.3	150.00	20.0	156.	0.0	0.0	26.7	0.0	26.7
76/06/14	23:48	1.8	150.00	20.0	148.	0.0	6.7	106.7	0.0	113.4
76/06/15	02:30	2.2	150.00	20.0	143.	0.0	0.0	46.7	0.0	46.7
76/06/15	05:15	1.8	150.00	20.0	144.	13.3	0.0	53.3	0.0	53.3
76/06/16	08:10	1.3	150.00	20.0	166.	0.0	0.0	0.0	0.0	0.0
76/06/16	10:52	1.2	150.00	20.0	171.	0.0	0.0	6.7	0.0	6.7
76/06/16	13:38	1.8	150.00	22.0	175.	0.0	0.0	20.0	0.0	20.0
76/06/16	16:20	2.0	150.00	23.0	178.	0.0	0.0	20.0	0.0	20.0
76/06/16	19:03	1.8	150.00	21.0	174.	0.0	0.0	66.7	0.0	66.7
76/06/16	23:10	1.4	150.00	21.0	165.	0.0	6.7	20.0	0.0	26.7
76/06/17	02:05	2.0	150.00	21.0	168.	0.0	0.0	60.0	0.0	60.0
76/06/17	04:55	2.1	150.00	21.0	206.	0.0	6.7	20.0	0.0	26.7
76/06/18	08:20	1.5	150.00	21.0	150.	0.0	0.0	53.3	0.0	53.3
76/06/18	11:09	1.1	150.00	21.0	150.	0.0	0.0	0.0	0.0	0.0
76/06/18	13:51	1.4	151.00	21.0	150.	6.6	19.9	26.5	0.0	46.4
76/06/18	16:40	1.9	152.00	22.0	150.	0.0	13.2	46.1	0.0	59.3
76/06/18	22:25	1.4	150.00	22.0	150.	0.0	0.0	73.3	0.0	73.3
76/06/19	01:15	1.4	150.00	22.0	150.	0.0	20.0	53.3	0.0	73.3
76/06/19	04:10	1.9	150.00	22.0	150.	0.0	6.7	13.3	0.0	20.0
76/06/21	08:15	1.8	150.00	23.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/21	11:01	1.5	150.00	22.0	155.	0.0	6.7	13.3	0.0	20.0
76/06/21	13:51	1.2	167.00	22.0	155.	0.0	0.0	0.0	0.0	0.0
76/06/21	16:50	1.5	157.00	23.0	182.	0.0	0.0	63.7	0.0	63.7
76/06/21	19:45	2.0	150.00	23.5	176.	0.0	13.3	66.7	0.0	80.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/21	22:30	1.9	150.00	23.0	175.	0.0	0.0	20.0	0.0	20.0
76/06/22	01:20	1.5	150.00	22.0	164.	0.0	6.7	20.0	0.0	26.7
76/06/22	04:10	1.4	150.00	22.0	159.	0.0	0.0	40.0	0.0	40.0
76/06/23	08:15	1.8	150.00	23.0	180.	0.0	0.0	0.0	0.0	0.0
76/06/23	11:06	1.6	150.00	23.0	183.	0.0	0.0	0.0	0.0	0.0
76/06/23	13:46	1.3	150.00	23.0	174.	0.0	0.0	13.3	0.0	13.3
76/06/23	16:44	1.3	160.00	23.0	184.	0.0	0.0	0.0	0.0	0.0
76/06/23	19:37	1.9	161.00	23.5	181.	0.0	0.0	37.3	0.0	37.3
76/06/24	01:30	1.7	150.00	24.0	180.	0.0	0.0	20.0	0.0	20.0
76/06/24	04:15	1.3	150.00	23.0	177.	0.0	0.0	60.0	0.0	60.0
76/06/25	08:20	1.6	150.00	24.0	160.	20.0	0.0	0.0	0.0	0.0
76/06/25	11:11	1.9	150.00	24.0	160.	6.7	0.0	0.0	0.0	0.0
76/06/25	13:51	1.6	150.00	24.0	160.	0.0	0.0	6.7	0.0	6.7
76/06/25	16:45	1.3	154.00	24.0	188.	0.0	0.0	6.5	0.0	6.5
76/06/25	22:20	2.2	150.00	24.0	185.	20.0	6.7	53.3	0.0	60.0
76/06/26	01:30	2.0	150.00	24.0	168.	13.3	0.0	13.3	0.0	13.3
76/06/26	04:23	1.5	150.00	24.0	170.	13.3	0.0	46.7	0.0	46.7
76/06/28	17:00	1.5	150.00	25.0	172.	0.0	0.0	0.0	0.0	0.0
76/06/28	20:55	1.3	150.00	25.0	147.	0.0	0.0	33.3	0.0	33.3
76/06/28	23:45	2.2	150.00	25.0	194.	0.0	13.3	200.0	0.0	213.3
76/06/29	05:32	1.6	150.00	25.0	186.	0.0	0.0	33.3	0.0	33.3
76/06/30	08:20	1.3	150.00	25.0	217.	0.0	0.0	6.7	0.0	6.7
76/06/30	11:11	1.7	150.00	26.0	227.	0.0	0.0	6.7	0.0	6.7
76/06/30	13:51	2.2	150.00	26.0	223.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:44	2.1	160.00	25.5	216.	0.0	0.0	0.0	0.0	0.0
76/06/30	19:54	1.5	150.00	25.0	223.	0.0	0.0	6.7	0.0	6.7
76/06/30	22:55	1.8	150.00	25.0	225.	0.0	0.0	20.0	0.0	20.0
76/07/01	01:35	2.4	72.00	25.0	180.	0.0	0.0	0.0	0.0	0.0
76/07/01	05:23	2.1	150.00	25.0	-9999.	6.7	0.0	13.3	0.0	13.3
76/07/02	08:20	1.5	150.00	25.0	229.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/02	11:06	1.3	150.00	25.0	232.	6.7	0.0	6.7	0.0	6.7
76/07/02	13:51	2.0	159.00	26.0	237.	0.0	0.0	6.3	0.0	6.3
76/07/02	16:42	2.1	149.00	26.0	234.	0.0	0.0	0.0	0.0	0.0
76/07/02	19:35	1.5	150.00	25.0	228.	0.0	0.0	20.0	0.0	20.0
76/07/02	22:20	-9.9	159.00	25.0	223.	0.0	0.0	0.0	0.0	0.0
76/07/03	01:25	1.7	150.00	25.0	229.	0.0	0.0	26.7	0.0	26.7
76/07/03	04:00	2.1	150.00	24.5	226.	0.0	6.7	0.0	0.0	6.7
76/07/07	08:19	2.0	150.00	26.0	251.	6.7	0.0	0.0	0.0	0.0
76/07/07	11:11	1.7	150.00	26.0	246.	0.0	0.0	0.0	0.0	0.0
76/07/07	13:57	1.2	150.00	26.0	250.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:00	1.4	187.00	26.0	223.	5.3	0.0	10.7	0.0	10.7
76/07/07	20:20	2.3	150.00	26.0	227.	0.0	0.0	0.0	0.0	0.0
76/07/07	23:12	2.2	150.00	25.0	226.	0.0	0.0	0.0	6.7	6.7
76/07/08	02:30	1.5	150.00	26.0	214.	0.0	0.0	0.0	0.0	0.0
76/07/08	06:13	1.5	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/09	08:20	1.9	150.00	26.0	237.	0.0	0.0	0.0	0.0	0.0
76/07/09	11:20	2.0	150.00	27.0	238.	6.7	0.0	0.0	0.0	0.0
76/07/09	14:11	1.4	150.00	26.0	235.	0.0	0.0	6.7	0.0	6.7
76/07/09	17:12	1.1	150.00	26.0	239.	0.0	0.0	0.0	0.0	0.0
76/07/09	19:50	1.8	157.00	26.0	237.	0.0	0.0	6.4	0.0	6.4
76/07/09	22:40	2.2	150.00	26.5	251.	6.7	0.0	0.0	0.0	0.0
76/07/12	09:25	1.5	150.00	26.0	249.	0.0	0.0	0.0	0.0	0.0
76/07/12	12:16	2.1	150.00	26.0	243.	0.0	0.0	0.0	0.0	0.0
76/07/12	15:08	1.9	150.00	26.0	243.	6.7	0.0	0.0	0.0	0.0
76/07/12	18:50	1.1	150.00	26.0	240.	0.0	0.0	0.0	0.0	0.0
76/07/12	21:40	1.5	150.00	25.5	223.	0.0	0.0	0.0	0.0	0.0
76/07/13	01:00	2.2	150.00	25.5	216.	6.7	0.0	0.0	0.0	0.0
76/07/13	04:20	1.9	150.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/13	07:21	1.3	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:20	1.3	150.00	25.0	223.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/14	11:11	1.6	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/14	13:53	2.1	151.00	25.0	214.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:45	2.0	159.00	25.0	227.	0.0	0.0	0.0	0.0	0.0
76/07/14	20:12	1.3	156.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/14	23:30	1.8	150.00	25.0	213.	0.0	6.7	20.0	0.0	26.7
76/07/15	02:30	2.3	150.00	25.0	203.	0.0	0.0	6.7	0.0	6.7
76/07/15	05:25	1.8	150.00	25.0	125.	0.0	0.0	0.0	0.0	0.0
76/07/16	08:20	1.4	150.00	25.0	225.	0.0	0.0	0.0	0.0	0.0
76/07/16	11:08	1.3	150.00	25.0	220.	0.0	0.0	13.3	0.0	13.3
76/07/16	13:46	1.9	150.00	25.0	222.	6.7	0.0	0.0	0.0	0.0
76/07/16	16:45	2.2	150.00	25.0	227.	0.0	0.0	0.0	0.0	0.0
76/07/16	19:27	1.9	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/16	22:25	1.4	150.00	25.0	216.	0.0	0.0	6.7	0.0	6.7
76/07/17	01:20	1.8	150.00	25.0	194.	0.0	0.0	0.0	0.0	0.0
76/07/17	04:26	2.1	150.00	25.0	200.	0.0	0.0	0.0	6.7	6.7
76/07/19	08:20	1.5	150.00	25.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/19	11:10	1.1	150.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	14:01	1.2	152.00	25.0	211.	0.0	0.0	0.0	0.0	0.0
76/07/19	16:55	1.8	220.00	25.0	215.	0.0	0.0	0.0	0.0	0.0
76/07/19	20:40	1.9	150.00	25.0	217.	0.0	0.0	13.3	0.0	13.3
76/07/19	23:35	1.4	150.00	25.0	210.	0.0	0.0	0.0	0.0	0.0
76/07/20	02:45	1.3	150.00	25.0	194.	0.0	0.0	0.0	0.0	0.0
76/07/20	06:00	2.8	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/21	08:12	1.8	150.00	25.0	221.	6.7	0.0	0.0	0.0	0.0
76/07/21	11:05	1.5	150.00	25.0	219.	0.0	0.0	0.0	0.0	0.0
76/07/21	13:50	1.1	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	16:35	1.5	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/21	19:34	2.0	150.00	25.0	228.	0.0	0.0	0.0	0.0	0.0
76/07/21	22:20	1.9	150.00	25.0	222.	0.0	0.0	0.0	6.7	6.7
76/07/22	01:20	1.4	150.00	25.0	226.	0.0	0.0	0.0	6.7	6.7

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/22	04:20	1.2	150.00	25.0	125.	0.0	0.0	0.0	6.7	6.7
76/07/23	08:20	1.8	150.00	25.0	218.	0.0	0.0	0.0	0.0	0.0
76/07/23	11:08	1.8	150.00	25.0	221.	0.0	0.0	0.0	0.0	0.0
76/07/23	13:51	1.3	150.00	25.0	181.	0.0	0.0	0.0	0.0	0.0
76/07/23	17:45	1.4	150.00	25.0	178.	0.0	0.0	0.0	0.0	0.0
76/07/23	19:50	1.9	150.00	25.0	183.	0.0	0.0	13.3	0.0	13.3
76/07/23	22:40	2.3	150.00	25.0	185.	0.0	0.0	13.3	0.0	13.3
76/07/24	05:00	1.3	150.00	25.0	195.	0.0	0.0	0.0	0.0	0.0
76/07/26	08:20	1.4	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/26	11:08	2.0	150.00	25.0	208.	0.0	0.0	0.0	0.0	0.0
76/07/26	13:52	1.8	150.00	25.0	209.	0.0	0.0	0.0	0.0	0.0
76/07/26	16:45	1.6	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/26	19:50	1.4	150.00	25.0	201.	0.0	0.0	0.0	0.0	0.0
76/07/26	22:40	2.2	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	00:05	2.3	150.00	25.0	207.	0.0	0.0	0.0	0.0	0.0
76/07/27	04:10	1.6	150.00	25.0	165.	0.0	0.0	0.0	0.0	0.0
76/07/27	07:11	1.2	150.00	25.0	160.	0.0	0.0	0.0	0.0	0.0
76/07/28	08:20	1.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	11:06	2.0	150.00	25.0	199.	0.0	0.0	0.0	0.0	0.0
76/07/28	13:46	2.2	150.00	25.0	206.	0.0	0.0	0.0	0.0	0.0
76/07/28	16:30	1.6	150.00	25.0	203.	0.0	0.0	0.0	0.0	0.0
76/07/28	19:30	1.2	160.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/28	22:35	1.9	150.00	25.0	204.	0.0	0.0	20.0	6.7	26.7
76/07/29	01:30	2.3	150.00	25.0	204.	0.0	0.0	0.0	0.0	0.0
76/07/29	04:20	2.2	150.00	25.0	159.	0.0	0.0	0.0	0.0	0.0
76/07/29	07:06	1.4	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0
76/07/30	08:20	1.3	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	11:13	1.5	150.00	25.0	185.	0.0	0.0	0.0	0.0	0.0
76/07/30	13:53	2.2	150.00	25.0	190.	0.0	0.0	0.0	0.0	0.0
76/07/30	17:50	2.2	150.00	25.0	200.	0.0	0.0	0.0	0.0	0.0

CYPRINIDAE FAMILY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/24	13:50	1.8	150.00	22.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/24	16:30	1.3	153.00	23.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/24	19:17	1.3	159.00	23.0	260.	0.0	0.0	6.3	0.0	6.3
76/08/24	22:00	2.1	150.00	23.0	260.	0.0	0.0	20.0	0.0	20.0
76/08/25	00:48	1.9	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/25	03:32	1.7	150.00	24.0	220.	0.0	0.0	6.7	0.0	6.7
76/08/25	06:25	1.2	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/26	08:15	1.1	150.00	24.0	240.	0.0	0.0	0.0	0.0	0.0
76/08/26	10:57	2.0	150.00	24.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/26	13:39	2.2	150.00	24.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/26	16:30	1.6	150.00	25.0	250.	0.0	0.0	0.0	0.0	0.0
76/08/26	19:15	1.2	150.00	25.0	260.	0.0	0.0	0.0	0.0	0.0
76/08/26	22:10	1.9	150.00	25.0	250.	0.0	0.0	20.0	0.0	20.0
76/08/27	01:05	2.3	150.00	24.5	250.	0.0	0.0	6.7	0.0	6.7
76/08/27	03:51	2.1	150.00	24.5	230.	0.0	0.0	0.0	0.0	0.0
76/08/27	06:50	1.4	150.00	25.0	270.	0.0	0.0	0.0	6.7	6.7
76/08/30	08:50	1.2	150.00	22.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	11:41	1.2	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	14:22	1.7	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	17:11	2.1	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	19:49	1.6	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/30	22:59	1.4	150.00	23.0	450.	0.0	0.0	0.0	0.0	0.0
76/08/31	02:10	1.7	150.00	23.0	460.	0.0	0.0	6.7	0.0	6.7
76/08/31	05:04	2.0	150.00	22.5	465.	0.0	0.0	0.0	0.0	0.0

3.2 BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS AND MANIFOLD PUMP), 1976

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/28/76	B	06:09	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	11:20	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/04/76	M	11:20	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/04/76	B	11:20	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/04/76	S	12:00	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/04/76	M	12:00	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/04/76	B	12:00	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/04/76	S	18:50	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
05/04/76	M	18:50	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
05/04/76	B	18:50	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	19:35	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
05/04/76	M	19:35	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
05/04/76	B	19:35	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	23:47	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/04/76	M	23:47	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/04/76	B	23:47	0.6	33.30	0.0	0.0	0.0	0.0	0.0
05/05/76	S	00:37	0.6	25.80	310.1	0.0	0.0	0.0	0.0
05/05/76	M	00:37	0.6	30.30	0.0	0.0	0.0	0.0	0.0
05/05/76	B	00:37	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/05/76	S	05:00	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/05/76	M	05:00	0.5	30.30	1221.1	0.0	0.0	0.0	0.0
05/05/76	B	05:00	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/05/76	S	05:47	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/05/76	M	05:47	0.3	34.20	204.7	0.0	0.0	0.0	0.0
05/05/76	B	05:47	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/11/76	S	10:45	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/11/76	M	10:45	0.5	30.30	66.0	0.0	0.0	0.0	0.0
05/11/76	B	10:45	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/11/76	S	11:32	0.3	30.00	166.7	0.0	0.0	0.0	0.0
05/11/76	M	11:32	0.3	34.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/11/76	B	11:32	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/11/76	S	18:50	0.7	25.80	503.9	0.0	0.0	0.0	0.0
05/11/76	M	18:50	0.7	30.30	66.0	0.0	0.0	0.0	0.0
05/11/76	B	18:50	0.9	26.40	0.0	0.0	37.9	0.0	37.9
05/11/76	S	19:28	0.9	22.50	222.2	0.0	0.0	0.0	0.0
05/11/76	M	19:28	0.9	24.60	0.0	0.0	0.0	0.0	0.0
05/11/76	B	19:28	0.9	26.40	0.0	0.0	0.0	0.0	0.0
05/11/76	S	23:25	0.8	22.50	533.3	0.0	0.0	0.0	0.0
05/11/76	M	23:25	0.8	24.60	0.0	0.0	0.0	0.0	0.0
05/11/76	B	23:25	0.6	33.30	30.0	0.0	0.0	0.0	0.0
05/12/76	S	00:17	0.6	25.80	503.9	0.0	0.0	0.0	0.0
05/12/76	M	00:17	0.6	30.30	0.0	0.0	0.0	0.0	0.0
05/12/76	B	00:17	0.4	33.30	30.0	0.0	0.0	0.0	0.0
05/12/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
05/12/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
05/12/76	B	05:25	0.0	41.10	0.0	0.0	24.3	0.0	24.3
05/12/76	S	06:25	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/12/76	M	06:25	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/12/76	B	06:25	0.3	32.10	31.2	0.0	0.0	0.0	0.0
05/18/76	S	10:20	-0.1	31.80	0.0	31.4	0.0	0.0	31.4
05/18/76	M	10:20	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
05/18/76	B	10:20	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
05/18/76	S	11:00	0.1	33.60	29.8	0.0	0.0	0.0	0.0
05/18/76	M	11:00	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/18/76	B	11:00	0.1	41.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	18:22	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	18:22	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/18/76	B	18:22	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	19:09	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	19:09	0.3	34.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/18/76	B	19:09	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/19/76	S	00:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/19/76	M	00:10	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:10	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/19/76	S	00:55	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	00:55	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:55	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/19/76	S	05:10	0.7	25.80	77.5	0.0	0.0	0.0	0.0
05/19/76	M	05:10	0.7	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	05:10	0.7	33.30	0.0	0.0	0.0	0.0	0.0
05/19/76	S	06:03	0.4	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	06:03	0.4	30.30	33.0	0.0	0.0	0.0	0.0
05/19/76	B	06:03	0.4	33.30	30.0	0.0	30.0	0.0	30.0
05/25/76	S	10:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/25/76	M	10:40	0.5	30.30	0.0	0.0	33.0	0.0	33.0
05/25/76	B	10:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	10:40	0.5	28.60	0.0	0.0	0.0	0.0	0.0
05/25/76	S	11:30	0.4	25.80	0.0	0.0	0.0	0.0	0.0
05/25/76	M	11:30	0.4	30.30	33.0	0.0	0.0	0.0	0.0
05/25/76	B	11:30	0.4	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	11:30	0.4	28.50	0.0	0.0	0.0	0.0	0.0
05/25/76	S	19:18	0.8	22.50	0.0	0.0	0.0	0.0	0.0
05/25/76	M	19:18	0.8	24.60	0.0	0.0	0.0	0.0	0.0
05/25/76	B	19:18	0.8	26.40	0.0	0.0	0.0	0.0	0.0
05/25/76	O	19:09	0.8	28.50	0.0	0.0	0.0	0.0	0.0
05/25/76	S	20:02	1.1	22.50	0.0	0.0	0.0	0.0	0.0
05/25/76	N	20:02	1.1	24.60	0.0	0.0	81.3	0.0	81.3
05/25/76	B	20:02	1.1	26.40	1401.5	0.0	0.0	0.0	0.0
05/25/76	O	20:00	1.1	28.50	0.0	0.0	35.1	0.0	35.1
05/26/76	S	00:29	0.5	25.80	1744.2	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/26/76	M	00:29	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/26/76	B	00:29	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/26/76	O	00:20	0.5	29.40	0.0	0.0	34.0	0.0	34.0
05/26/76	S	01:15	0.2	33.60	1845.2	0.0	0.0	0.0	0.0
05/26/76	M	01:15	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	01:15	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	01:18	0.2	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	04:44	0.1	33.60	2053.6	0.0	0.0	0.0	0.0
05/26/76	M	04:44	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	04:44	0.1	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	04:39	0.1	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	05:29	0.2	33.60	1517.9	0.0	0.0	0.0	0.0
05/26/76	M	05:28	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	05:28	0.2	41.10	0.0	0.0	24.3	0.0	24.3
05/26/76	O	05:35	0.2	28.50	0.0	0.0	0.0	35.1	35.1
06/01/76	S	12:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	12:18	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/01/76	B	12:18	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/01/76	O	12:16	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	13:11	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/01/76	M	13:11	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	13:11	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	O	13:14	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	18:35	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	18:35	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/01/76	B	18:35	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/01/76	O	18:32	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	21:12	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/01/76	M	21:12	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/01/76	B	21:12	0.2	41.10	0.0	0.0	48.7	0.0	48.7

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/01/76	O	21:15	0.2	28.50	0.0	0.0	35.1	0.0	35.1
06/01/76	S	23:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/01/76	M	23:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	23:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/01/76	O	23:53	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	S	00:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/02/76	M	00:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/02/76	B	00:49	0.8	26.40	75.8	0.0	0.0	0.0	0.0
06/02/76	O	00:50	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	S	05:23	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/02/76	M	05:23	0.3	34.20	0.0	0.0	58.5	0.0	58.5
06/02/76	B	05:23	0.3	32.10	0.0	0.0	62.3	0.0	62.3
06/02/76	O	05:23	0.3	29.10	0.0	0.0	0.0	0.0	0.0
06/02/76	S	06:31	0.1	33.60	238.1	0.0	0.0	0.0	0.0
06/02/76	M	06:31	0.1	32.70	0.0	0.0	0.0	0.0	0.0
06/02/76	B	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	O	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	11:06	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	11:06	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	11:06	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	11:05	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	12:08	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	12:08	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	12:08	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	12:05	-0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	20:16	0.9	22.50	0.0	44.4	0.0	0.0	44.4
06/08/76	M	20:16	0.9	24.60	0.0	0.0	0.0	0.0	0.0
06/08/76	B	20:16	0.9	26.40	0.0	0.0	0.0	0.0	0.0
06/08/76	O	20:16	0.9	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	21:16	-0.8	31.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/08/76	M	21:16	-0.8	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	21:16	-0.8	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	21:16	-0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	00:02	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/09/76	M	00:02	0.2	32.70	91.7	0.0	0.0	0.0	0.0
06/09/76	B	00:02	0.2	41.10	0.0	0.0	0.0	0.0	0.0
06/09/76	O	00:02	0.2	28.50	0.0	0.0	35.1	0.0	35.1
06/09/76	S	01:22	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/09/76	N	01:22	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/09/76	B	01:22	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/09/76	O	01:10	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	06:40	0.6	25.80	38.8	0.0	0.0	0.0	0.0
06/09/76	M	06:40	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	06:40	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	06:40	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	07:30	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	07:30	0.7	30.30	33.0	33.0	0.0	0.0	33.0
06/09/76	B	07:30	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	07:30	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	10:45	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	10:45	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	10:45	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	10:50	0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	11:25	0.5	25.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	11:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
06/15/76	B	11:25	0.5	33.30	0.0	0.0	0.0	0.0	0.0
06/15/76	O	11:35	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	18:01	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	18:01	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	18:01	-0.1	46.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/15/76	O	17:54	-0.1	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	19:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	19:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	19:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/15/76	O	18:51	-0.2	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	23:05	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	23:05	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	23:05	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	23:09	0.3	27.60	0.0	0.0	0.0	0.0	0.0
06/16/76	S	00:00	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	00:00	0.6	30.30	528.1	0.0	0.0	0.0	0.0
06/16/76	B	00:00	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	00:09	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	04:48	0.4	30.30	66.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	04:40	0.4	23.30	0.0	0.0	0.0	0.0	0.0
06/16/76	S	05:25	0.0	33.60	119.0	0.0	0.0	0.0	0.0
06/16/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/16/76	B	05:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
06/16/76	O	05:38	0.0	29.40	0.0	0.0	0.0	0.0	0.0
06/22/76	S	10:47	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/22/76	M	10:47	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/22/76	B	10:47	0.0	41.10	0.0	24.3	73.0	0.0	97.3
06/22/76	O	10:40	0.0	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	11:44	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/22/76	M	11:44	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/22/76	B	11:44	-0.2	46.20	0.0	0.0	86.6	0.0	86.6
06/22/76	O	11:51	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	20:09	0.7	15.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/22/76	M	20:09	0.7	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	20:09	0.7	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	20:09	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	21:17	0.6	15.00	0.0	0.0	66.7	0.0	66.7
06/22/76	M	21:17	0.6	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	21:17	0.6	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	21:17	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	23:25	0.5	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	23:25	0.5	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	23:25	0.5	24.60	0.0	0.0	40.7	0.0	40.7
06/22/76	O	23:25	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	00:27	0.1	30.30	0.0	0.0	33.0	0.0	33.0
06/23/76	B	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	00:27	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	04:40	0.2	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	04:45	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	05:25	0.3	18.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	05:25	0.3	24.45	0.0	0.0	0.0	0.0	0.0
06/23/76	B	05:25	0.3	22.80	0.0	0.0	0.0	0.0	0.0
06/23/76	O	05:35	0.3	28.70	0.0	0.0	0.0	0.0	0.0
06/30/76	S	11:49	0.7	25.80	77.5	0.0	0.0	0.0	0.0
06/30/76	M	11:49	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/30/76	B	11:49	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/30/76	O	11:49	0.7	28.50	0.0	0.0	70.2	0.0	70.2
06/30/76	S	12:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/30/76	M	12:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/30/76	B	12:49	0.8	26.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/30/76	O	12:49	0.8	28.50	0.0	0.0	0.0	0.0	0.0
07/01/76	S	00:25	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	00:25	1.1	24.60	0.0	0.0	40.7	0.0	40.7
07/01/76	B	00:25	1.1	26.40	0.0	0.0	37.9	0.0	37.9
07/01/76	S	01:02	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	01:02	1.1	24.60	0.0	0.0	0.0	0.0	0.0
07/01/76	B	01:02	1.1	26.40	0.0	0.0	151.5	0.0	151.5
07/06/76	S	11:05	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:05	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:05	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	11:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	11:55	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:55	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:55	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	12:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	19:04	1.0	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	19:04	1.0	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	19:04	1.0	26.40	0.0	0.0	37.9	0.0	37.9
07/06/76	O	18:45	1.0	28.50	0.0	0.0	35.1	0.0	35.1
07/06/76	S	20:04	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	20:04	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	20:04	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	19:32	0.8	30.00	0.0	0.0	33.3	0.0	33.3
07/07/76	S	00:04	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:04	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:04	0.1	41.10	0.0	0.0	0.0	0.0	0.0
07/06/76	O	23:47	0.1	30.00	0.0	0.0	33.3	0.0	33.3
07/07/76	S	00:46	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:46	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:46	0.1	41.10	0.0	0.0	24.3	0.0	24.3

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/07/76	O	00:58	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	S	04:02	0.3	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:02	0.3	34.20	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:02	0.3	32.10	0.0	0.0	31.2	0.0	31.2
07/07/76	O	04:00	0.3	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:40	0.5	30.30	0.0	0.0	33.0	0.0	33.0
07/07/76	B	04:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:50	0.5	29.70	0.0	0.0	0.0	0.0	0.0
07/13/76	S	11:44	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	11:44	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	11:44	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	11:44	0.8	27.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	12:58	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	12:58	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	12:58	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	13:00	0.8	33.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	18:04	-0.2	28.40	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:56	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:56	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:56	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	19:03	-0.2	25.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	22:46	0.7	25.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	22:46	0.7	30.30	0.0	0.0	0.0	0.0	0.0
07/13/76	B	22:46	0.7	33.30	0.0	0.0	0.0	0.0	0.0
07/13/76	O	22:39	0.7	28.50	0.0	0.0	175.4	175.4	350.8
07/13/76	S	23:35	0.9	22.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/13/76	M	23:35	0.9	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	23:35	0.9	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	23:45	0.9	28.50	0.0	0.0	175.4	35.1	210.5
07/14/76	S	05:30	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	05:30	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	05:30	0.1	41.10	0.0	0.0	97.3	0.0	97.3
07/14/76	O	05:35	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/14/76	S	06:10	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	06:10	0.0	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	06:10	0.0	41.10	0.0	0.0	0.0	0.0	0.0
07/14/76	O	06:15	0.0	28.50	0.0	0.0	35.1	0.0	35.1
07/20/76	S	11:00	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	11:00	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/20/76	B	11:00	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	11:03	-0.2	28.30	0.0	0.0	0.0	0.0	0.0
07/20/76	S	11:58	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	11:58	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
07/20/76	B	11:58	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	12:00	-0.3	30.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	19:58	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	19:58	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/20/76	B	19:58	0.5	33.30	0.0	0.0	0.0	0.0	0.0
07/20/76	O	20:12	0.5	28.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	21:39	0.2	33.60	0.0	0.0	0.0	0.0	0.0
07/20/76	M	21:39	0.2	32.70	0.0	0.0	0.0	0.0	0.0
07/20/76	B	21:39	0.2	41.10	0.0	0.0	0.0	0.0	0.0
07/21/76	S	00:39	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/21/76	M	00:39	0.0	32.70	0.0	0.0	0.0	0.0	0.0
07/21/76	B	00:39	0.0	41.10	0.0	0.0	0.0	0.0	0.0
07/21/76	S	01:29	0.0	33.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/03/76	S	12:13	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	12:13	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
08/03/76	B	12:13	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
08/03/76	O	13:02	-0.1	30.20	0.0	0.0	0.0	0.0	0.0
08/03/76	S	18:56	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	18:56	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/03/76	B	18:56	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/03/76	S	19:37	0.5	25.30	0.0	0.0	0.0	0.0	0.0
08/03/76	M	19:37	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/03/76	B	19:37	0.5	33.30	0.0	0.0	0.0	0.0	0.0
08/03/76	S	23:26	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	23:26	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
08/03/76	B	23:26	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/03/76	O	23:30	-0.2	32.20	0.0	0.0	0.0	0.0	0.0
08/04/76	S	00:10	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	00:10	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
08/04/76	B	00:10	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/04/76	O	00:25	-0.2	30.40	0.0	0.0	0.0	65.8	65.8
08/04/76	S	05:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	05:18	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	05:18	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	S	06:03	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	06:03	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	06:03	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	S	15:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
08/04/76	M	15:10	0.3	34.20	0.0	0.0	0.0	0.0	0.0
08/04/76	B	15:10	0.3	32.10	0.0	0.0	0.0	0.0	0.0
08/04/76	O	15:15	0.3	33.00	0.0	0.0	0.0	0.0	0.0
08/04/76	B	16:02	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	16:02	0.5	30.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/04/76	B	16:02	0.5	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	O	16:07	0.5	29.30	0.0	0.0	0.0	34.1	34.1
08/04/76	S	17:05	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/04/76	M	17:05	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/04/76	B	17:05	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/04/76	O	16:55	0.8	32.80	0.0	0.0	0.0	0.0	0.0
08/04/76	S	17:45	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/04/76	M	17:45	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/04/76	B	17:45	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/04/76	O	17:48	0.8	31.60	0.0	0.0	0.0	0.0	0.0
08/04/76	S	19:24	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/04/76	M	19:24	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/04/76	B	19:24	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/04/76	O	19:26	0.8	28.30	0.0	0.0	0.0	35.3	35.3
08/04/76	S	20:10	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	20:10	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	20:10	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	O	20:14	0.7	30.70	0.0	0.0	0.0	65.1	65.1
08/04/76	S	20:51	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	20:51	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	20:51	0.5	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	O	20:57	0.5	30.90	0.0	0.0	0.0	64.7	64.7
08/05/76	S	14:54	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	14:54	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
08/05/76	B	14:54	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
08/05/76	O	15:00	-0.1	33.87	0.0	0.0	0.0	0.0	0.0
08/05/76	S	15:48	0.2	33.60	0.0	0.0	0.0	0.0	0.0
08/05/76	M	15:48	0.2	32.70	0.0	0.0	0.0	0.0	0.0
08/05/76	B	15:48	0.2	41.10	0.0	0.0	0.0	0.0	0.0
08/05/76	O	15:53	0.2	32.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/05/76	S	16:34	0.4	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	16:34	0.4	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	16:34	0.4	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	16:41	0.4	31.10	0.0	0.0	0.0	0.0	0.0
08/05/76	S	17:39	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	17:39	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	17:39	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	17:32	0.7	33.10	0.0	0.0	0.0	0.0	0.0
08/05/76	S	19:28	0.9	22.50	0.0	0.0	0.0	0.0	0.0
08/05/76	M	19:28	0.9	24.60	0.0	0.0	0.0	0.0	0.0
08/05/76	B	19:28	0.9	26.40	0.0	0.0	0.0	0.0	0.0
08/05/76	O	19:33	0.9	28.60	0.0	0.0	0.0	0.0	0.0
08/05/76	S	20:30	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/05/76	M	20:30	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/05/76	B	20:30	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/05/76	O	20:21	0.8	24.00	0.0	0.0	0.0	41.7	41.7
08/05/76	S	21:12	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	21:12	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	21:12	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	21:16	0.7	24.40	0.0	0.0	0.0	0.0	0.0
08/10/76	S	11:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	11:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	11:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	11:43	0.8	30.60	0.0	0.0	0.0	0.0	0.0
08/10/76	S	12:31	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	12:31	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	12:31	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	12:20	0.8	29.80	0.0	0.0	0.0	0.0	0.0
08/10/76	S	18:30	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/10/76	M	18:30	-0.2	38.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

WHITE PERCH

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/10/76	B	18:30	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/10/76	O	18:32	-0.2	32.40	0.0	0.0	0.0	0.0	0.0
08/10/76	S	19:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/10/76	M	19:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/10/76	B	19:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/10/76	O	19:26	0.0	32.40	0.0	0.0	0.0	61.7	61.7
08/10/76	S	23:17	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	23:17	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	23:17	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	23:19	0.8	32.50	0.0	0.0	0.0	0.0	0.0
08/11/76	S	00:18	0.9	22.50	0.0	0.0	0.0	0.0	0.0
08/11/76	M	00:18	0.9	24.60	0.0	0.0	0.0	0.0	0.0
08/11/76	B	00:18	0.9	26.40	0.0	0.0	0.0	0.0	0.0
08/11/76	O	00:19	0.9	33.50	0.0	0.0	0.0	0.0	0.0
08/11/76	S	04:37	0.2	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	04:37	0.2	32.70	0.0	0.0	0.0	0.0	0.0
08/11/76	B	04:37	0.2	41.10	0.0	0.0	0.0	0.0	0.0
08/11/76	O	04:39	0.2	32.40	0.0	0.0	0.0	0.0	0.0
08/11/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/11/76	B	05:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/11/76	O	05:31	0.0	29.60	0.0	0.0	0.0	0.0	0.0
08/17/76	S	10:56	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
08/17/76	M	10:56	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
08/17/76	B	10:56	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
08/17/76	O	10:59	-0.3	31.40	0.0	0.0	0.0	0.0	0.0
08/17/76	S	12:05	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/17/76	M	12:05	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/17/76	B	12:05	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/17/76	O	12:06	0.0	31.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/11/76	B	11:32	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/11/76	S	18:50	0.7	25.80	0.0	77.5	0.0	0.0	77.5
05/11/76	M	18:50	0.7	30.30	0.0	0.0	0.0	0.0	0.0
05/11/76	B	18:50	0.9	26.40	0.0	0.0	0.0	0.0	0.0
05/11/76	S	19:28	0.9	22.50	0.0	0.0	0.0	0.0	0.0
05/11/76	M	19:28	0.9	24.60	0.0	40.7	0.0	0.0	40.7
05/11/76	B	19:28	0.9	26.40	0.0	0.0	0.0	0.0	0.0
05/11/76	S	23:25	0.8	22.50	0.0	0.0	0.0	0.0	0.0
05/11/76	M	23:25	0.8	24.60	0.0	0.0	0.0	0.0	0.0
05/11/76	B	23:25	0.6	33.30	0.0	0.0	0.0	0.0	0.0
05/12/76	S	00:17	0.6	25.80	0.0	0.0	0.0	0.0	0.0
05/12/76	M	00:17	0.6	30.30	0.0	0.0	0.0	0.0	0.0
05/12/76	B	00:17	0.4	33.30	0.0	30.0	0.0	0.0	30.0
05/12/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
05/12/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
05/12/76	B	05:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
05/12/76	S	06:25	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/12/76	M	06:25	0.3	34.20	0.0	29.2	0.0	0.0	29.2
05/12/76	B	06:25	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	10:20	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
05/18/76	M	10:20	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
05/18/76	B	10:20	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
05/18/76	S	11:00	0.1	33.60	0.0	0.0	0.0	0.0	0.0
05/18/76	M	11:00	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/18/76	B	11:00	0.1	41.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	18:22	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	18:22	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/18/76	B	18:22	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	19:09	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	19:09	0.3	34.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/18/76	B	19:09	0.3	32.10	0.0	31.2	0.0	0.0	31.2
05/19/76	S	00:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/19/76	M	00:10	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:10	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/19/76	S	00:55	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	00:55	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:55	0.5	33.30	0.0	30.0	0.0	0.0	30.0
05/19/76	S	05:10	0.7	25.80	0.0	38.8	0.0	0.0	38.8
05/19/76	M	05:10	0.7	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	05:10	0.7	33.30	0.0	0.0	0.0	0.0	0.0
05/19/76	S	06:03	0.4	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	06:03	0.4	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	06:03	0.4	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	S	10:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/25/76	M	10:40	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/25/76	B	10:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	10:40	0.5	28.60	0.0	0.0	0.0	0.0	0.0
05/25/76	S	11:30	0.4	25.80	0.0	0.0	0.0	0.0	0.0
05/25/76	M	11:30	0.4	30.30	0.0	0.0	0.0	0.0	0.0
05/25/76	B	11:30	0.4	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	11:30	0.4	28.50	0.0	0.0	0.0	0.0	0.0
05/25/76	S	19:18	0.8	22.50	0.0	0.0	0.0	0.0	0.0
05/25/76	M	19:18	0.8	24.60	0.0	0.0	0.0	0.0	0.0
05/25/76	B	19:18	0.8	26.40	0.0	0.0	0.0	0.0	0.0
05/25/76	O	19:09	0.8	28.50	0.0	0.0	0.0	0.0	0.0
05/25/76	S	20:02	1.1	22.50	0.0	0.0	0.0	0.0	0.0
05/25/76	M	20:02	1.1	24.60	0.0	81.3	0.0	0.0	81.3
05/25/76	B	20:02	1.1	26.40	0.0	0.0	0.0	0.0	0.0
05/25/76	O	20:00	1.1	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	00:29	0.5	25.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/08/76	M	21:16	-0.8	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	21:16	-0.8	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	21:16	-0.8	28.50	0.0	0.0	35.1	0.0	35.1
06/09/76	S	00:02	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/09/76	M	00:02	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/09/76	B	00:02	0.2	41.10	0.0	0.0	0.0	0.0	0.0
06/09/76	O	00:02	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	01:22	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	01:22	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/09/76	B	01:22	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/09/76	O	01:10	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	06:40	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	06:40	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	06:40	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	06:40	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	07:30	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	07:30	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	07:30	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	07:30	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	10:45	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	10:45	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	10:45	0.3	32.10	0.0	62.3	62.3	0.0	124.6
06/15/76	O	10:50	0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	11:25	0.5	25.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	11:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
06/15/76	B	11:25	0.5	33.30	0.0	0.0	60.1	0.0	60.1
06/15/76	O	11:35	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	18:01	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	18:01	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	18:01	-0.1	46.20	0.0	0.0	86.6	0.0	86.6

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/15/76	O	17:54	-0.1	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	19:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	19:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	19:04	-0.2	46.20	0.0	21.6	21.6	0.0	43.2
06/15/76	O	18:51	-0.2	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	23:05	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	23:05	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	23:05	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	23:09	0.3	27.60	0.0	0.0	72.5	0.0	72.5
06/16/76	S	00:00	0.6	25.80	0.0	38.8	0.0	0.0	38.8
06/16/76	M	00:00	0.6	30.30	0.0	0.0	66.0	0.0	66.0
06/16/76	B	00:00	0.6	33.30	0.0	0.0	30.0	0.0	30.0
06/16/76	O	00:09	0.6	28.50	0.0	0.0	105.3	0.0	105.3
06/16/76	B	04:48	0.4	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	04:48	0.4	30.30	0.0	0.0	99.0	0.0	99.0
06/16/76	B	04:48	0.4	33.30	0.0	0.0	60.1	0.0	60.1
06/16/76	O	04:40	0.4	23.30	0.0	0.0	0.0	0.0	0.0
06/16/76	S	05:25	0.0	33.60	0.0	29.8	0.0	0.0	29.8
06/16/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/16/76	B	05:25	0.0	41.10	0.0	0.0	24.3	0.0	24.3
06/16/76	O	05:38	0.0	29.40	0.0	0.0	102.0	0.0	102.0
06/22/76	S	10:47	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/22/76	M	10:47	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/22/76	B	10:47	0.0	41.10	0.0	0.0	0.0	0.0	0.0
06/22/76	O	10:40	0.0	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	11:44	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/22/76	M	11:44	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/22/76	B	11:44	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/22/76	O	11:51	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	20:09	0.7	15.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/22/76	M	20:09	0.7	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	20:09	0.7	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	20:09	0.7	28.50	0.0	0.0	35.1	0.0	35.1
06/22/76	S	21:17	0.6	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	21:17	0.6	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	21:17	0.6	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	21:17	0.6	28.50	0.0	0.0	35.1	0.0	35.1
06/22/76	S	23:25	0.5	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	23:25	0.5	18.60	0.0	0.0	53.8	0.0	53.8
06/22/76	B	23:25	0.5	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	23:25	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	00:27	0.1	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	00:27	0.1	21.00	0.0	0.0	95.2	0.0	95.2
06/23/76	O	00:27	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	04:40	0.2	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	04:40	0.2	21.00	0.0	0.0	238.1	0.0	238.1
06/23/76	O	04:45	0.2	28.50	0.0	0.0	35.1	0.0	35.1
06/23/76	S	05:25	0.3	18.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	05:25	0.3	24.45	0.0	0.0	0.0	0.0	0.0
06/23/76	B	05:25	0.3	22.80	0.0	0.0	219.3	0.0	219.3
06/23/76	O	05:35	0.3	28.70	0.0	0.0	243.9	0.0	243.9
06/30/76	S	11:49	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/30/76	M	11:49	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/30/76	B	11:49	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/30/76	O	11:49	0.7	28.50	0.0	0.0	35.1	0.0	35.1
06/30/76	S	12:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/30/76	M	12:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/30/76	B	12:49	0.8	26.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/30/76	O	12:49	0.8	28.50	0.0	0.0	0.0	0.0	0.0
07/01/76	S	00:25	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	00:25	1.1	24.60	0.0	0.0	40.7	0.0	40.7
07/01/76	B	00:25	1.1	26.40	0.0	0.0	113.6	0.0	113.6
07/01/76	S	01:02	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	01:02	1.1	24.60	0.0	0.0	122.0	0.0	122.0
07/01/76	B	01:02	1.1	26.40	0.0	0.0	37.9	0.0	37.9
07/06/76	S	11:05	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:05	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:05	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	11:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	11:55	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:55	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:55	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	12:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	19:04	1.0	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	19:04	1.0	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	19:04	1.0	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	18:45	1.0	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	20:04	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	20:04	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	20:04	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	19:32	0.8	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	S	00:04	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:04	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:04	0.1	41.10	0.0	0.0	24.3	0.0	24.3
07/06/76	O	23:47	0.1	30.00	0.0	0.0	100.0	33.3	133.3
07/07/76	S	00:46	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:46	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:46	0.1	41.10	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/07/76	O	00:58	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	S	04:02	0.3	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:02	0.3	34.20	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:02	0.3	32.10	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:00	0.3	28.50	0.0	0.0	35.1	0.0	35.1
07/07/76	B	04:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:40	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	33.30	0.0	0.0	90.1	0.0	90.1
07/07/76	O	04:50	0.5	29.70	0.0	0.0	67.3	0.0	67.3
07/13/76	S	11:44	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	11:44	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	11:44	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	11:44	0.8	27.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	12:58	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	12:58	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	12:58	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	13:00	0.8	33.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	18:04	-0.2	28.40	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:56	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:56	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:56	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	19:03	-0.2	25.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	22:46	0.7	25.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	22:46	0.7	30.30	0.0	0.0	0.0	0.0	0.0
07/13/76	B	22:46	0.7	33.30	0.0	0.0	30.0	0.0	30.0
07/13/76	O	22:39	0.7	28.50	0.0	0.0	105.3	0.0	105.3
07/13/76	S	23:35	0.9	22.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/13/76	M	23:35	0.9	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	23:35	0.9	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	23:45	0.9	28.50	0.0	0.0	140.4	70.2	210.6
07/14/76	S	05:30	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	05:30	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	05:30	0.1	41.10	0.0	0.0	0.0	0.0	0.0
07/14/76	O	05:35	0.1	28.50	0.0	0.0	35.1	0.0	35.1
07/14/76	S	06:10	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	06:10	0.0	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	06:10	0.0	41.10	0.0	0.0	0.0	0.0	0.0
07/14/76	O	06:15	0.0	28.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	11:00	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	11:00	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/20/76	B	11:00	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	11:03	-0.2	28.30	0.0	0.0	0.0	0.0	0.0
07/20/76	S	11:58	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	11:58	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
07/20/76	B	11:58	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	12:00	-0.3	30.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	19:58	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	19:58	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/20/76	B	19:58	0.5	33.30	0.0	0.0	0.0	0.0	0.0
07/20/76	O	20:12	0.5	28.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	21:39	0.2	33.60	0.0	0.0	0.0	0.0	0.0
07/20/76	M	21:39	0.2	32.70	0.0	0.0	0.0	0.0	0.0
07/20/76	B	21:39	0.2	41.10	0.0	0.0	0.0	0.0	0.0
07/21/76	S	00:39	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/21/76	M	00:39	0.0	32.70	0.0	0.0	0.0	0.0	0.0
07/21/76	B	00:39	0.0	41.10	0.0	0.0	0.0	0.0	0.0
07/21/76	S	01:29	0.0	33.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/27/76	B	23:25	1.0	26.40	0.0	0.0	0.0	0.0	0.0
07/27/76	O	23:02	1.0	29.10	0.0	0.0	0.0	34.4	34.4
07/28/76	S	04:55	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
07/28/76	M	04:55	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
07/28/76	B	04:55	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
07/28/76	O	05:00	-0.1	30.00	0.0	0.0	0.0	0.0	0.0
07/28/76	S	05:35	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
07/28/76	M	05:35	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
07/28/76	B	05:35	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
07/28/76	O	05:45	-0.1	27.80	0.0	0.0	0.0	0.0	0.0
08/02/76	S	11:45	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
08/02/76	M	11:45	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
08/02/76	B	11:45	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
08/02/76	O	11:45	-0.1	29.30	0.0	0.0	0.0	0.0	0.0
08/02/76	S	13:45	0.4	25.80	0.0	0.0	0.0	0.0	0.0
08/02/76	M	13:45	0.4	30.30	0.0	0.0	0.0	0.0	0.0
08/02/76	B	13:45	0.4	33.30	0.0	0.0	0.0	0.0	0.0
08/02/76	O	13:45	0.4	32.00	0.0	0.0	0.0	0.0	0.0
08/02/76	S	14:40	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/02/76	M	14:40	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/02/76	B	14:40	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/02/76	O	14:40	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/02/76	S	15:30	0.9	22.50	0.0	0.0	0.0	0.0	0.0
08/02/76	M	15:30	0.9	24.60	0.0	0.0	0.0	0.0	0.0
08/02/76	B	15:30	0.9	26.40	0.0	0.0	0.0	0.0	0.0
08/02/76	O	15:30	0.9	30.70	0.0	0.0	0.0	0.0	0.0
08/03/76	S	11:24	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	11:24	-0.4	38.40	0.0	0.0	0.0	0.0	0.0
08/03/76	B	11:24	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
08/03/76	O	12:00	-0.4	28.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

STRIPED BASS

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/10/76	B	18:30	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/10/76	O	18:32	-0.2	32.40	0.0	0.0	0.0	0.0	0.0
08/10/76	S	19:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/10/76	M	19:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/10/76	B	19:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/10/76	O	19:26	0.0	32.40	0.0	0.0	0.0	30.9	30.9
08/10/76	S	23:17	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	23:17	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	23:17	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	23:19	0.8	32.50	0.0	0.0	0.0	0.0	0.0
08/11/76	S	00:18	0.9	22.50	0.0	0.0	0.0	0.0	0.0
08/11/76	M	00:18	0.9	24.60	0.0	0.0	0.0	0.0	0.0
08/11/76	B	00:18	0.9	26.40	0.0	0.0	0.0	0.0	0.0
08/11/76	O	00:19	0.9	33.50	0.0	0.0	0.0	0.0	0.0
08/11/76	S	04:37	0.2	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	04:37	0.2	32.70	0.0	0.0	0.0	0.0	0.0
08/11/76	B	04:37	0.2	41.10	0.0	0.0	0.0	0.0	0.0
08/11/76	O	04:39	0.2	32.40	0.0	0.0	0.0	0.0	0.0
08/11/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/11/76	B	05:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/11/76	O	05:31	0.0	29.60	0.0	0.0	0.0	0.0	0.0
08/17/76	S	10:56	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
08/17/76	M	10:56	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
08/17/76	B	10:56	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
08/17/76	O	10:59	-0.3	31.40	0.0	0.0	0.0	0.0	0.0
08/17/76	S	12:05	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/17/76	M	12:05	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/17/76	B	12:05	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/17/76	O	12:06	0.0	31.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/05/76	O	17:24	0.0	37.58	0.0	0.0	0.0	0.0	0.0
02/05/76	O	23:47	0.3	58.32	0.0	0.0	0.0	0.0	0.0
02/10/76	M	13:02	0.0	45.00	0.0	0.0	0.0	0.0	0.0
02/10/76	M	17:06	0.5	58.32	0.0	0.0	0.0	0.0	0.0
02/10/76	M	22:55	0.1	52.92	0.0	0.0	0.0	0.0	0.0
02/11/76	M	07:02	0.7	47.88	0.0	0.0	0.0	0.0	0.0
02/11/76	O	12:08	0.0	47.88	0.0	0.0	0.0	0.0	0.0
02/17/76	O	11:15	1.0	48.00	0.0	0.0	0.0	0.0	0.0
02/17/76	O	17:06	0.0	47.88	0.0	0.0	0.0	0.0	0.0
02/17/76	O	23:02	0.9	47.88	0.0	0.0	0.0	0.0	0.0
02/18/76	O	06:19	0.0	47.88	0.0	0.0	0.0	0.0	0.0
02/24/76	O	11:29	0.0	50.00	0.0	20.0	0.0	0.0	20.0
02/24/76	O	17:05	0.4	50.00	0.0	120.0	0.0	0.0	120.0
02/25/76	O	01:00	-0.3	50.00	0.0	100.0	0.0	0.0	100.0
02/25/76	O	08:30	0.5	47.88	0.0	104.4	0.0	0.0	104.4
03/02/76	O	13:03	0.9	41.00	0.0	97.6	0.0	0.0	97.6
03/02/76	O	19:15	0.3	43.20	0.0	23.1	0.0	0.0	23.1
03/03/76	O	02:10	0.7	43.20	0.0	69.4	0.0	0.0	69.4
03/03/76	O	08:38	0.5	43.20	0.0	46.3	0.0	0.0	46.3
03/09/76	O	12:48	0.8	43.20	0.0	185.2	0.0	0.0	185.2
03/09/76	O	19:45	0.2	52.92	0.0	207.9	0.0	0.0	207.9
03/10/76	O	01:40	0.5	52.92	0.0	283.4	0.0	0.0	283.4
03/10/76	O	08:01	0.7	47.88	0.0	459.5	0.0	0.0	459.5
03/16/76	O	14:25	1.0	47.88	0.0	0.0	480.4	0.0	480.4
03/16/76	O	18:12	0.2	47.88	0.0	0.0	1190.5	0.0	1190.5
03/16/76	O	23:33	1.4	47.88	0.0	41.8	1545.5	0.0	1587.3
03/17/76	O	06:25	-0.2	47.88	0.0	0.0	1086.0	0.0	1086.0
03/23/76	O	12:45	-0.3	40.00	0.0	0.0	25.0	0.0	25.0
03/23/76	O	19:22	0.2	43.20	0.0	324.1	92.6	0.0	416.7
03/23/76	O	23:05	-0.2	43.20	0.0	370.4	69.4	0.0	439.8

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
03/24/76	O	05:30	0.7	47.88	0.0	459.5	125.3	0.0	584.8
03/30/76	S	15:06	0.0	33.60	0.0	0.0	0.0	0.0	0.0
03/30/76	M	15:06	0.0	32.70	0.0	0.0	0.0	0.0	0.0
03/30/76	B	15:06	0.0	41.10	0.0	0.0	0.0	0.0	0.0
03/30/76	S	16:08	-0.1	31.80	0.0	31.4	0.0	0.0	31.4
03/30/76	M	16:08	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
03/30/76	B	16:08	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
03/30/76	S	17:55	0.2	33.60	0.0	0.0	0.0	0.0	0.0
03/30/76	M	17:55	0.2	32.70	0.0	0.0	0.0	0.0	0.0
03/30/76	B	17:55	0.2	41.10	0.0	73.0	0.0	0.0	73.0
03/30/76	S	18:34	0.5	25.80	0.0	38.8	0.0	0.0	38.8
03/30/76	M	18:34	0.5	30.30	0.0	66.0	0.0	0.0	66.0
03/30/76	B	18:34	0.5	33.30	0.0	0.0	0.0	0.0	0.0
03/30/76	S	22:57	1.1	22.50	0.0	44.4	0.0	0.0	44.4
03/30/76	M	22:57	1.1	24.60	0.0	0.0	0.0	0.0	0.0
03/30/76	B	22:57	1.1	26.40	0.0	0.0	37.9	0.0	37.9
03/31/76	S	00:01	0.9	22.50	0.0	0.0	44.4	0.0	44.4
03/31/76	M	00:01	0.9	24.60	0.0	0.0	0.0	0.0	0.0
03/31/76	B	00:01	0.9	26.40	0.0	0.0	0.0	0.0	0.0
03/31/76	S	07:38	0.4	25.80	0.0	0.0	0.0	0.0	0.0
03/31/76	M	07:38	0.4	30.30	0.0	33.0	0.0	0.0	33.0
03/31/76	B	07:38	0.4	33.30	0.0	0.0	0.0	0.0	0.0
03/31/76	S	08:29	0.7	25.80	0.0	0.0	0.0	0.0	0.0
03/31/76	B	08:29	0.7	30.30	0.0	0.0	0.0	0.0	0.0
03/31/76	B	08:29	0.7	33.30	0.0	0.0	0.0	0.0	0.0
04/06/76	S	13:02	0.6	25.80	0.0	0.0	0.0	0.0	0.0
04/06/76	M	13:02	0.6	30.30	0.0	0.0	0.0	0.0	0.0
04/06/76	B	13:02	0.6	33.30	0.0	0.0	0.0	0.0	0.0
04/06/76	S	13:50	1.0	22.50	0.0	0.0	0.0	0.0	0.0
04/06/76	M	13:50	1.0	24.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/06/76	B	13:50	1.0	26.40	0.0	0.0	0.0	0.0	0.0
04/06/76	S	18:20	0.2	33.60	0.0	0.0	0.0	0.0	0.0
04/06/76	M	18:20	0.2	32.70	0.0	0.0	0.0	0.0	0.0
04/06/76	B	18:20	0.2	41.10	0.0	0.0	0.0	0.0	0.0
04/06/76	S	19:06	0.1	33.60	0.0	0.0	0.0	0.0	0.0
04/06/76	M	19:06	0.1	32.70	0.0	0.0	0.0	0.0	0.0
04/06/76	B	19:06	0.1	41.10	0.0	0.0	0.0	0.0	0.0
04/07/76	S	00:48	0.5	25.80	0.0	0.0	0.0	0.0	0.0
04/07/76	M	00:48	0.5	30.30	0.0	0.0	0.0	0.0	0.0
04/07/76	B	00:48	0.5	33.30	0.0	0.0	0.0	0.0	0.0
04/07/76	S	01:28	0.6	25.80	0.0	0.0	0.0	0.0	0.0
04/07/76	M	01:28	0.6	30.30	0.0	0.0	0.0	0.0	0.0
04/07/76	B	01:28	0.6	33.30	0.0	0.0	0.0	0.0	0.0
04/07/76	S	05:10	0.5	25.80	0.0	0.0	0.0	0.0	0.0
04/07/76	M	05:10	0.5	30.30	0.0	0.0	0.0	0.0	0.0
04/07/76	B	05:10	0.5	33.30	0.0	0.0	0.0	0.0	0.0
04/07/76	S	05:55	0.3	30.00	0.0	0.0	0.0	0.0	0.0
04/07/76	M	05:55	0.3	34.20	0.0	0.0	0.0	0.0	0.0
04/07/76	B	05:55	0.3	32.10	0.0	0.0	0.0	0.0	0.0
04/13/76	S	13:45	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
04/13/76	M	13:45	-0.4	38.40	0.0	0.0	26.0	0.0	26.0
04/13/76	B	13:45	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
04/13/76	S	14:40	-0.5	31.80	0.0	0.0	0.0	0.0	0.0
04/13/76	M	14:40	-0.5	38.40	0.0	0.0	26.0	26.0	52.0
04/13/76	B	14:40	-0.5	46.20	0.0	0.0	64.9	21.6	86.5
04/13/76	S	19:20	0.5	25.80	0.0	0.0	38.8	0.0	38.8
04/13/76	M	19:20	0.5	30.30	0.0	0.0	660.1	132.0	792.1
04/13/76	B	19:20	0.5	33.30	0.0	0.0	540.5	90.1	630.6
04/13/76	S	19:55	0.7	25.80	0.0	0.0	0.0	0.0	0.0
04/13/76	M	19:55	0.7	30.30	0.0	0.0	297.0	99.0	396.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/13/76	B	19:55	0.7	33.30	0.0	0.0	660.7	180.2	840.9
04/13/76	S	23:05	0.7	25.80	0.0	0.0	0.0	0.0	0.0
04/13/76	M	23:05	0.7	30.30	0.0	0.0	0.0	0.0	0.0
04/13/76	B	23:05	0.7	33.30	0.0	0.0	240.2	0.0	240.2
04/13/76	S	23:47	0.5	25.80	0.0	0.0	0.0	0.0	0.0
04/13/76	M	23:47	0.5	30.30	0.0	0.0	165.0	0.0	165.0
04/13/76	B	23:47	0.5	33.30	0.0	0.0	540.5	180.2	720.7
04/14/76	S	08:16	0.6	25.80	0.0	0.0	0.0	0.0	0.0
04/14/76	M	08:16	0.6	30.30	0.0	0.0	33.0	0.0	33.0
04/14/76	B	08:16	0.6	33.30	0.0	0.0	150.2	60.1	210.3
04/14/76	S	08:57	0.8	22.50	0.0	0.0	0.0	0.0	0.0
04/14/76	M	08:57	0.8	24.60	0.0	0.0	0.0	0.0	0.0
04/14/76	B	08:57	0.8	26.40	0.0	0.0	37.9	0.0	37.9
04/20/76	S	11:26	-0.1	31.80	0.0	0.0	62.9	0.0	62.9
04/20/76	M	11:26	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
04/20/76	B	11:26	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
04/20/76	S	12:07	0.2	33.60	0.0	0.0	0.0	0.0	0.0
04/20/76	M	12:07	0.2	32.70	0.0	0.0	0.0	0.0	0.0
04/20/76	B	12:07	0.2	41.10	0.0	0.0	0.0	0.0	0.0
04/20/76	S	17:15	0.4	25.80	0.0	0.0	0.0	0.0	0.0
04/20/76	M	17:15	0.4	30.30	0.0	0.0	0.0	0.0	0.0
04/20/76	B	17:15	0.4	33.30	0.0	0.0	0.0	0.0	0.0
04/20/76	S	17:57	0.3	30.00	0.0	0.0	0.0	0.0	0.0
04/20/76	M	17:57	0.3	34.20	0.0	0.0	0.0	0.0	0.0
04/20/76	B	17:57	0.3	32.10	0.0	0.0	0.0	0.0	0.0
04/20/76	S	23:15	0.0	33.60	0.0	0.0	0.0	0.0	0.0
04/20/76	M	23:15	0.0	32.70	0.0	0.0	0.0	0.0	0.0
04/20/76	B	23:15	0.0	41.10	0.0	0.0	24.3	0.0	24.3
04/20/76	S	23:55	0.1	33.60	0.0	0.0	0.0	0.0	0.0
04/20/76	M	23:55	0.1	32.70	0.0	0.0	0.0	30.6	30.6

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/20/76	B	23:55	0.1	41.10	0.0	0.0	0.0	0.0	0.0
04/21/76	S	04:37	0.7	25.80	0.0	0.0	0.0	0.0	0.0
04/21/76	M	04:37	0.7	30.30	0.0	0.0	0.0	0.0	0.0
04/21/76	B	04:37	0.7	33.30	0.0	0.0	0.0	0.0	0.0
04/21/76	S	05:15	0.6	25.80	0.0	0.0	0.0	0.0	0.0
04/21/76	M	05:15	0.6	30.30	0.0	0.0	0.0	0.0	0.0
04/21/76	B	05:15	0.6	33.30	0.0	0.0	0.0	0.0	0.0
04/27/76	S	14:25	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
04/24/76	M	14:25	-0.4	38.40	0.0	0.0	0.0	0.0	0.0
04/27/76	B	14:25	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
04/27/76	S	15:15	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
04/27/76	M	15:15	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
04/27/76	B	15:15	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
04/27/76	S	20:50	0.4	25.80	0.0	0.0	0.0	0.0	0.0
04/27/76	M	20:50	0.4	30.30	0.0	0.0	0.0	0.0	0.0
04/27/76	B	20:50	0.4	33.30	0.0	0.0	30.0	0.0	30.0
04/27/76	S	21:25	0.5	25.80	0.0	0.0	0.0	0.0	0.0
04/27/76	M	21:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
04/27/76	B	21:25	0.5	33.30	0.0	0.0	0.0	0.0	0.0
04/28/76	S	01:20	0.1	33.60	0.0	0.0	0.0	0.0	0.0
04/28/76	M	01:20	0.1	32.70	0.0	0.0	30.6	0.0	30.6
04/28/76	B	01:20	0.1	41.10	0.0	0.0	0.0	48.7	48.7
04/28/76	S	02:00	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	02:00	-0.1	38.40	0.0	0.0	0.0	52.1	52.1
04/28/76	B	02:00	-0.1	46.20	0.0	0.0	43.3	0.0	43.3
04/28/76	S	05:32	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	05:23	-0.4	38.40	0.0	0.0	0.0	0.0	0.0
04/28/76	B	05:23	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
04/28/76	S	06:09	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	06:09	-0.3	38.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/28/76	B	06:09	-0.3	46.20	0.0	0.0	0.0	21.6	21.6
05/04/76	S	11:20	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/04/76	M	11:20	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/04/76	B	11:20	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/04/76	S	12:00	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/04/76	M	12:00	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/04/76	B	12:00	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/04/76	S	18:50	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
05/04/76	M	18:50	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
05/04/76	B	18:50	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	19:35	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
05/04/76	M	19:35	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
05/04/76	B	19:35	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	23:47	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/04/76	M	23:47	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/04/76	B	23:47	0.6	33.30	0.0	0.0	0.0	0.0	0.0
05/05/76	S	00:37	0.6	25.80	0.0	0.0	0.0	0.0	0.0
05/05/76	M	00:37	0.6	30.30	0.0	0.0	0.0	0.0	0.0
05/05/76	B	00:37	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/05/76	S	05:00	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/05/76	M	05:00	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/05/76	B	05:00	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/05/76	S	05:47	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/05/76	M	05:47	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/05/76	B	05:47	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/11/76	S	10:45	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/11/76	M	10:45	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/11/76	B	10:45	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/11/76	S	11:32	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/11/76	M	11:32	0.3	34.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/26/76	M	00:29	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/26/76	B	00:29	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/26/76	O	00:20	0.5	29.40	0.0	0.0	0.0	34.0	34.0
05/26/76	S	01:15	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/26/76	M	01:15	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	01:15	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	01:18	0.2	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	04:44	0.1	33.60	0.0	0.0	0.0	0.0	0.0
05/26/76	M	04:44	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	04:44	0.1	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	04:39	0.1	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	05:29	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/26/76	M	05:28	0.2	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	05:28	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	05:35	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	12:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	12:18	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/01/76	B	12:18	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/01/76	O	12:16	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	13:11	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/01/76	M	13:11	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	13:11	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	O	13:14	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	18:35	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	18:35	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/01/76	B	18:35	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/01/76	O	18:32	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	21:12	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/01/76	M	21:12	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/01/76	B	21:12	0.2	41.10	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE, M=MIDDLE, B=BOTTOM, O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/01/76	O	21:15	0.2	28.50	0.0	0.0	0.0	35.1	35.1
06/01/76	S	23:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/01/76	M	23:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	23:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/01/76	O	23:53	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	S	00:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/02/76	M	00:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/02/76	B	00:49	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/02/76	O	00:50	0.8	28.50	0.0	0.0	0.0	70.2	70.2
06/02/76	S	05:23	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/02/76	M	05:23	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/02/76	B	05:23	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/02/76	O	05:23	0.3	29.10	0.0	0.0	0.0	68.7	68.7
06/02/76	S	06:31	0.1	33.60	0.0	0.0	0.0	0.0	0.0
06/02/76	M	06:31	0.1	32.70	0.0	0.0	0.0	0.0	0.0
06/02/76	B	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	O	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	11:06	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	11:06	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	11:06	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	11:05	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	12:08	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	12:08	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	12:08	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	12:05	-0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	20:16	0.9	22.50	0.0	0.0	0.0	0.0	0.0
06/08/76	M	20:16	0.9	24.60	0.0	0.0	0.0	0.0	0.0
06/08/76	B	20:16	0.9	26.40	0.0	0.0	0.0	0.0	0.0
06/08/76	O	20:16	0.9	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	21:16	-0.8	31.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/01/76	O	21:15	0.2	28.50	0.0	0.0	0.0	35.1	35.1
06/01/76	S	23:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/01/76	M	23:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	23:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/01/76	O	23:53	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	S	00:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/02/76	M	00:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/02/76	B	00:49	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/02/76	O	00:50	0.8	28.50	0.0	0.0	0.0	70.2	70.2
06/02/76	S	05:23	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/02/76	M	05:23	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/02/76	B	05:23	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/02/76	O	05:23	0.3	29.10	0.0	0.0	0.0	68.7	68.7
06/02/76	S	06:31	0.1	33.60	0.0	0.0	0.0	0.0	0.0
06/02/76	M	06:31	0.1	32.70	0.0	0.0	0.0	0.0	0.0
06/02/76	B	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	O	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	11:06	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	11:06	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	11:06	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	11:05	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	12:08	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	12:08	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	12:08	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	12:05	-0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	20:16	0.9	22.50	0.0	0.0	0.0	0.0	0.0
06/08/76	M	20:16	0.9	24.60	0.0	0.0	0.0	0.0	0.0
06/08/76	B	20:16	0.9	26.40	0.0	0.0	0.0	0.0	0.0
06/08/76	O	20:16	0.9	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	21:16	-0.8	31.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/08/76	M	21:16	-0.8	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	21:16	-0.8	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	21:16	-0.8	28.50	0.0	0.0	0.0	35.1	35.1
06/09/76	S	00:02	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/09/76	M	00:02	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/09/76	B	00:02	0.2	41.10	0.0	0.0	0.0	0.0	0.0
06/09/76	O	00:02	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	01:22	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	01:22	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/09/76	B	01:22	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/09/76	O	01:10	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	06:40	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	06:40	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	06:40	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	06:40	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	07:30	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	07:30	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	07:30	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/09/76	O	07:30	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	10:45	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	10:45	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	10:45	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	10:50	0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	11:25	0.5	25.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	11:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
06/15/76	B	11:25	0.5	33.30	0.0	0.0	0.0	0.0	0.0
06/15/76	O	11:35	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	18:01	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	18:01	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	18:01	-0.1	46.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY (NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/15/76	O	17:54	-0.1	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	19:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	19:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	19:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/15/76	O	18:51	-0.2	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	23:05	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	23:05	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	23:05	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	23:09	0.3	27.60	0.0	0.0	0.0	36.2	36.2
06/16/76	S	00:00	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	00:00	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/16/76	B	00:00	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	00:09	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	04:48	0.4	30.30	0.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	04:40	0.4	23.30	0.0	0.0	0.0	42.9	42.9
06/16/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/16/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/16/76	B	05:25	0.0	41.10	0.0	0.0	0.0	0.0	0.0
06/16/76	O	05:38	0.0	29.40	0.0	0.0	0.0	0.0	0.0
06/22/76	S	10:47	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/22/76	M	10:47	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/22/76	B	10:47	0.0	41.10	0.0	0.0	0.0	0.0	0.0
06/22/76	O	10:40	0.0	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	11:44	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/22/76	M	11:44	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/22/76	B	11:44	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/22/76	O	11:51	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	20:09	0.7	15.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

ATLANTIC TOMCOD

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/07/76	O	00:58	0.1	28.50	0.0	0.0	0.0	35.1	35.1
07/07/76	S	04:02	0.3	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:02	0.3	34.20	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:02	0.3	32.10	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:00	0.3	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:40	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:50	0.5	29.70	0.0	0.0	0.0	0.0	0.0
07/13/76	S	11:44	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	11:44	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	11:44	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	11:44	0.8	27.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	12:58	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	12:58	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	12:58	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	13:00	0.8	33.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	18:04	-0.2	28.40	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:56	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:56	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:56	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	19:03	-0.2	25.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	22:46	0.7	25.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	22:46	0.7	30.30	0.0	0.0	0.0	0.0	0.0
07/13/76	B	22:46	0.7	33.30	0.0	0.0	0.0	0.0	0.0
07/13/76	O	22:39	0.7	28.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	23:35	0.9	22.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/22/76	M	20:09	0.7	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	20:09	0.7	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	20:09	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	21:17	0.6	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	21:17	0.6	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	21:17	0.6	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	21:17	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	23:25	0.5	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	23:25	0.5	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	23:25	0.5	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	23:25	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	00:27	0.1	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	00:27	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	04:40	0.2	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	04:45	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	05:25	0.3	18.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	05:25	0.3	24.45	0.0	0.0	0.0	0.0	0.0
06/23/76	B	05:25	0.3	22.80	0.0	0.0	0.0	0.0	0.0
06/23/76	O	05:35	0.3	28.70	0.0	0.0	0.0	0.0	0.0
06/30/76	S	11:49	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/30/76	M	11:49	0.7	30.30	0.0	0.0	33.0	0.0	33.0
06/30/76	B	11:49	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/30/76	O	11:49	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/30/76	S	12:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/30/76	M	12:49	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/30/76	B	12:49	0.8	26.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/30/76	O	12:49	0.8	28.50	0.0	0.0	0.0	0.0	0.0
07/01/76	S	00:25	1.1	22.50	0.0	0.0	88.9	0.0	88.9
07/01/76	M	00:25	1.1	24.60	0.0	0.0	365.9	0.0	365.9
07/01/76	B	00:25	1.1	26.40	0.0	0.0	378.8	0.0	378.8
07/01/76	S	01:02	1.1	22.50	0.0	0.0	577.8	0.0	577.8
07/01/76	M	01:02	1.1	24.60	0.0	0.0	853.7	0.0	853.7
07/01/76	B	01:02	1.1	26.40	0.0	0.0	643.9	0.0	643.9
07/06/76	S	11:05	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:05	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:05	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	11:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	11:55	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:55	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:55	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	12:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	19:04	1.0	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	19:04	1.0	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	19:04	1.0	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	18:45	1.0	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	20:04	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	20:04	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	20:04	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	19:32	0.8	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	S	00:04	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:04	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:04	0.1	41.10	0.0	0.0	0.0	0.0	0.0
07/06/76	O	23:47	0.1	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	S	00:46	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:46	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:46	0.1	41.10	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/07/76	O	00:58	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	S	04:02	0.3	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:02	0.3	34.20	0.0	0.0	29.2	0.0	29.2
07/07/76	B	04:02	0.3	32.10	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:00	0.3	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:40	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	33.30	0.0	0.0	30.0	0.0	30.0
07/07/76	O	04:50	0.5	29.70	0.0	0.0	0.0	0.0	0.0
07/13/76	S	11:44	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	11:44	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	11:44	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	11:44	0.8	27.00	0.0	0.0	74.1	0.0	74.1
07/13/76	S	12:58	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	N	12:58	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	12:58	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	13:00	0.8	33.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	18:04	-0.2	28.40	0.0	0.0	35.2	0.0	35.2
07/13/76	S	18:56	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:56	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:56	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	19:03	-0.2	25.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	22:46	0.7	25.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	22:46	0.7	30.30	0.0	0.0	33.0	0.0	33.0
07/13/76	B	22:46	0.7	33.30	0.0	0.0	30.0	30.0	60.0
07/13/76	O	22:39	0.7	28.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	23:35	0.9	22.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/13/76	M	23:35	0.9	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	23:35	0.9	26.40	0.0	0.0	75.8	0.0	75.8
07/13/76	O	23:45	0.9	28.50	0.0	0.0	0.0	0.0	0.0
07/14/76	S	05:30	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	05:30	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	05:30	0.1	41.10	0.0	0.0	0.0	0.0	0.0
07/14/76	O	05:35	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/14/76	S	06:10	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/14/76	M	06:10	0.0	32.70	0.0	0.0	0.0	0.0	0.0
07/14/76	B	06:10	0.0	41.10	0.0	0.0	0.0	0.0	0.0
07/14/76	O	06:15	0.0	28.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	11:00	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	11:00	-0.2	38.40	0.0	0.0	26.0	0.0	26.0
07/20/76	B	11:00	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	11:03	-0.2	28.30	0.0	0.0	0.0	0.0	0.0
07/20/76	S	11:58	-0.3	31.80	0.0	0.0	31.4	0.0	31.4
07/20/76	M	11:58	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
07/20/76	B	11:58	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
07/20/76	O	12:00	-0.3	30.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	19:58	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/20/76	M	19:58	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/20/76	B	19:58	0.5	33.30	0.0	0.0	1291.3	120.1	1411.4
07/20/76	O	20:12	0.5	28.50	0.0	0.0	0.0	0.0	0.0
07/20/76	S	21:39	0.2	33.60	0.0	0.0	0.0	0.0	0.0
07/20/76	M	21:39	0.2	32.70	0.0	0.0	91.7	0.0	91.7
07/20/76	B	21:39	0.2	41.10	0.0	0.0	1046.2	340.6	1386.8
07/21/76	S	00:39	0.0	33.60	0.0	0.0	0.0	0.0	0.0
07/21/76	M	00:39	0.0	32.70	0.0	0.0	122.3	0.0	122.3
07/21/76	B	00:39	0.0	41.10	0.0	0.0	1532.8	316.3	1849.1
07/21/76	S	01:29	0.0	33.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/21/76	M	01:29	0.0	32.70	0.0	0.0	30.6	0.0	30.6
07/21/76	B	01:29	0.0	41.10	0.0	24.3	1192.2	194.6	1411.1
07/21/76	S	04:44	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/21/76	M	04:44	0.1	32.70	0.0	0.0	30.6	0.0	30.6
07/21/76	B	04:44	0.1	41.10	0.0	0.0	170.3	0.0	170.3
07/21/76	S	05:36	0.2	33.60	0.0	29.8	0.0	0.0	29.8
07/21/76	M	05:36	0.2	32.70	0.0	0.0	0.0	0.0	0.0
07/21/76	B	05:36	0.2	41.10	0.0	0.0	365.0	24.3	389.3
07/27/76	S	11:35	0.8	22.50	0.0	0.0	44.4	0.0	44.4
07/27/76	M	11:35	0.8	24.60	0.0	0.0	1544.7	0.0	1544.7
07/27/76	B	11:35	0.8	26.40	0.0	0.0	1969.7	0.0	1969.7
07/27/76	O	11:40	0.8	31.20	0.0	32.1	64.1	0.0	96.2
07/27/76	S	12:20	0.7	25.80	0.0	0.0	38.8	0.0	38.8
07/27/76	M	12:20	0.7	30.30	0.0	33.0	1056.1	0.0	1089.1
07/27/76	B	12:20	0.7	33.30	30.0	30.0	1681.7	0.0	1711.7
07/27/76	O	12:35	0.7	29.80	0.0	0.0	0.0	0.0	0.0
07/27/76	S	18:55	-0.1	31.80	0.0	0.0	283.0	0.0	283.0
07/27/76	M	18:55	-0.1	38.40	0.0	0.0	1458.3	0.0	1458.3
07/27/76	B	18:55	-0.1	46.20	43.3	0.0	1969.7	0.0	1969.7
07/27/76	O	18:47	-0.1	29.10	0.0	0.0	0.0	0.0	0.0
07/27/76	S	19:55	0.2	33.60	0.0	0.0	506.0	0.0	506.0
07/27/76	M	19:55	0.2	32.70	30.6	0.0	2844.0	0.0	2844.0
07/27/76	B	19:55	0.2	41.10	292.0	0.0	1362.5	486.6	1849.1
07/27/76	O	19:44	0.2	24.70	809.7	0.0	40.5	121.5	162.0
07/27/76	S	22:24	0.9	22.50	0.0	0.0	577.8	0.0	577.8
07/27/76	M	22:24	0.9	24.60	40.7	0.0	3008.1	81.3	3089.4
07/27/76	B	22:24	0.9	26.40	0.0	0.0	2689.4	1287.9	3977.3
07/27/76	O	22:22	0.9	30.70	293.2	0.0	260.6	195.4	456.0
07/27/76	S	23:25	1.0	22.50	0.0	88.9	977.8	0.0	1066.7
07/27/76	M	23:25	1.0	24.60	0.0	0.0	1951.2	40.7	1991.9

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/27/76	B	23:25	1.0	26.40	265.2	0.0	1856.1	757.6	2613.7
07/27/76	O	23:02	1.0	29.10	1168.4	0.0	309.3	206.2	515.5
07/28/76	S	04:55	-0.1	31.80	0.0	0.0	377.4	0.0	377.4
07/28/76	M	04:55	-0.1	38.40	0.0	0.0	885.4	52.1	937.5
07/28/76	B	04:55	-0.1	46.20	0.0	0.0	2684.0	1471.9	4155.9
07/28/76	O	05:00	-0.1	30.00	566.7	0.0	633.3	400.0	1033.3
07/28/76	S	05:35	-0.1	31.80	0.0	0.0	94.3	0.0	94.3
07/28/76	M	05:35	-0.1	38.40	0.0	0.0	1562.5	0.0	1562.5
07/28/76	B	05:35	-0.1	46.20	151.5	0.0	1688.3	86.6	1774.9
07/28/76	O	05:45	-0.1	27.80	1259.0	0.0	0.0	755.4	755.4
08/02/76	S	11:45	-0.1	31.80	0.0	0.0	31.4	0.0	31.4
08/02/76	M	11:45	-0.1	38.40	0.0	52.1	520.8	0.0	572.9
08/02/76	B	11:45	-0.1	46.20	0.0	303.0	368.0	0.0	671.0
08/02/76	O	11:45	-0.1	29.30	0.0	0.0	68.3	0.0	68.3
08/02/76	S	13:45	0.4	25.80	38.8	0.0	116.3	0.0	116.3
08/02/76	M	13:45	0.4	30.30	0.0	627.1	4323.4	0.0	4950.5
08/02/76	B	13:45	0.4	33.30	30.0	660.7	510.5	0.0	1171.2
08/02/76	O	13:45	0.4	32.00	31.2	0.0	125.0	0.0	125.0
08/02/76	S	14:40	0.7	25.80	0.0	38.8	193.8	0.0	232.6
08/02/76	M	14:40	0.7	30.30	0.0	660.1	3201.3	0.0	3861.4
08/02/76	B	14:40	0.7	33.30	90.1	270.3	1321.3	0.0	1591.6
08/02/76	O	14:40	0.7	30.30	0.0	0.0	132.0	0.0	132.0
08/02/76	S	15:30	0.9	22.50	0.0	88.9	577.8	0.0	666.7
08/02/76	M	15:30	0.9	24.60	0.0	81.3	772.4	0.0	853.7
08/02/76	B	15:30	0.9	26.40	0.0	340.9	7992.4	0.0	8333.3
08/02/76	O	15:30	0.9	30.70	0.0	0.0	65.1	0.0	65.1
08/03/76	S	11:24	-0.4	31.80	0.0	0.0	31.4	0.0	31.4
08/03/76	M	11:24	-0.4	38.40	0.0	130.2	599.0	0.0	729.2
08/03/76	B	11:24	-0.4	46.20	0.0	21.6	1948.1	0.0	1969.7
08/03/76	O	12:00	-0.4	28.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/03/76	S	12:13	-0.3	31.80	0.0	0.0	62.9	0.0	62.9
08/03/76	M	12:13	-0.3	38.40	0.0	26.0	1718.8	0.0	1744.8
08/03/76	B	12:13	-0.3	46.20	0.0	64.9	735.9	0.0	800.8
08/03/76	O	13:02	-0.1	30.20	0.0	0.0	0.0	0.0	0.0
08/03/76	S	18:56	0.7	25.80	0.0	0.0	658.9	0.0	658.9
08/03/76	M	18:56	0.7	30.30	0.0	0.0	495.0	0.0	495.0
08/03/76	B	18:56	0.7	33.30	30.0	90.1	450.5	0.0	540.6
08/03/76	S	19:37	0.5	25.80	0.0	77.5	620.2	0.0	697.7
08/03/76	M	19:37	0.5	30.30	0.0	0.0	594.1	0.0	594.1
08/03/76	B	19:37	0.5	33.30	0.0	330.3	480.5	0.0	810.8
08/03/76	S	23:26	-0.2	31.80	0.0	0.0	157.2	0.0	157.2
08/03/76	M	23:26	-0.2	38.40	0.0	0.0	1328.1	0.0	1328.1
08/03/76	B	23:26	-0.2	46.20	0.0	43.3	3051.9	497.8	3593.0
08/03/76	O	23:30	-0.2	32.20	0.0	0.0	93.2	248.4	341.6
08/04/76	S	00:10	-0.2	31.80	0.0	0.0	283.0	0.0	283.0
08/04/76	M	00:10	-0.2	38.40	0.0	0.0	2031.3	0.0	2031.3
08/04/76	B	00:10	-0.2	46.20	0.0	0.0	2965.4	324.7	3290.1
08/04/76	O	00:25	-0.2	30.40	98.7	0.0	65.8	32.9	98.7
08/04/76	S	05:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	05:18	0.7	30.30	0.0	0.0	1188.1	0.0	1188.1
08/04/76	B	05:18	0.7	33.30	0.0	0.0	2372.4	240.2	2612.6
08/04/76	S	06:03	0.7	25.80	0.0	0.0	1550.4	0.0	1550.4
08/04/76	M	06:03	0.7	30.30	0.0	0.0	594.1	0.0	594.1
08/04/76	B	06:03	0.7	33.30	0.0	0.0	2012.0	30.0	2042.0
08/04/76	S	15:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
08/04/76	M	15:10	0.3	34.20	0.0	0.0	818.7	0.0	818.7
08/04/76	B	15:10	0.3	32.10	0.0	0.0	311.5	0.0	311.5
08/04/76	O	15:15	0.3	33.00	0.0	0.0	30.3	424.2	454.5
08/04/76	B	16:02	0.5	25.80	0.0	0.0	77.5	0.0	77.5
08/04/76	M	16:02	0.5	30.30	0.0	0.0	2640.3	0.0	2640.3

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/04/76	B	16:02	0.5	33.30	0.0	0.0	540.5	0.0	540.5
08/04/76	O	16:07	0.5	29.30	0.0	0.0	102.4	238.9	341.3
08/04/76	S	17:05	0.8	22.50	0.0	44.4	311.1	0.0	355.5
08/04/76	M	17:05	0.8	24.60	0.0	0.0	365.9	0.0	365.9
08/04/76	B	17:05	0.8	26.40	0.0	0.0	1136.4	0.0	1136.4
08/04/76	O	16:55	0.8	32.80	0.0	0.0	91.5	30.5	122.0
08/04/76	S	17:45	0.8	22.50	0.0	0.0	444.4	0.0	444.4
08/04/76	M	17:45	0.8	24.60	0.0	0.0	122.0	0.0	122.0
08/04/76	B	17:45	0.8	26.40	0.0	0.0	947.0	0.0	947.0
08/04/76	O	17:48	0.8	31.60	0.0	0.0	0.0	0.0	0.0
08/04/76	S	19:24	0.8	22.50	0.0	0.0	222.2	0.0	222.2
08/04/76	M	19:24	0.8	24.60	0.0	0.0	406.5	0.0	406.5
08/04/76	B	19:24	0.8	26.40	0.0	0.0	757.6	0.0	757.6
08/04/76	O	19:26	0.8	28.30	0.0	0.0	0.0	0.0	0.0
08/04/76	S	20:10	0.7	25.80	0.0	0.0	116.3	0.0	116.3
08/04/76	M	20:10	0.7	30.30	0.0	0.0	825.1	0.0	825.1
08/04/76	B	20:10	0.7	33.30	0.0	0.0	660.7	270.3	931.0
08/04/76	O	20:14	0.7	30.70	0.0	0.0	97.7	32.6	130.3
08/04/76	S	20:51	0.5	25.80	0.0	0.0	38.8	0.0	38.8
08/04/76	M	20:51	0.5	30.30	0.0	0.0	561.1	0.0	561.1
08/04/76	B	20:51	0.5	33.30	0.0	0.0	3033.0	720.7	3753.7
08/04/76	O	20:57	0.5	30.90	0.0	0.0	258.9	161.8	420.7
08/05/76	S	14:54	-0.1	31.80	0.0	0.0	0.0	31.4	31.4
08/05/76	M	14:54	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
08/05/76	B	14:54	-0.1	46.20	0.0	0.0	86.6	0.0	86.6
08/05/76	O	15:00	-0.1	33.87	0.0	0.0	0.0	0.0	0.0
08/05/76	S	15:48	0.2	33.60	0.0	0.0	0.0	0.0	0.0
08/05/76	M	15:48	0.2	32.70	0.0	0.0	30.6	0.0	30.6
08/05/76	B	15:48	0.2	41.10	0.0	0.0	121.7	0.0	121.7
08/05/76	O	15:53	0.2	32.50	0.0	0.0	30.8	30.8	61.6

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/05/76	S	16:34	0.4	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	16:34	0.4	30.30	0.0	0.0	231.0	0.0	231.0
08/05/76	B	16:34	0.4	33.30	0.0	0.0	330.3	0.0	330.3
08/05/76	O	16:41	0.4	31.10	0.0	0.0	0.0	0.0	0.0
08/05/76	S	17:39	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	17:39	0.7	30.30	0.0	0.0	99.0	0.0	99.0
08/05/76	B	17:39	0.7	33.30	0.0	0.0	630.6	0.0	630.6
08/05/76	O	17:32	0.7	33.10	0.0	0.0	30.2	0.0	30.2
08/05/76	S	19:28	0.9	22.50	0.0	0.0	0.0	44.4	44.4
08/05/76	M	19:28	0.9	24.60	0.0	0.0	122.0	0.0	122.0
08/05/76	B	19:28	0.9	26.40	0.0	0.0	1325.8	37.9	1363.7
08/05/76	O	19:33	0.9	28.60	0.0	0.0	35.0	69.9	104.9
08/05/76	S	20:30	0.8	22.50	0.0	0.0	44.4	0.0	44.4
08/05/76	M	20:30	0.8	24.60	0.0	0.0	447.2	0.0	447.2
08/05/76	B	20:30	0.8	26.40	0.0	37.9	1098.5	416.7	1553.1
08/05/76	O	20:21	0.8	24.00	0.0	0.0	41.7	83.3	125.0
08/05/76	S	21:12	0.7	25.80	0.0	0.0	116.3	0.0	116.3
08/05/76	M	21:12	0.7	30.30	0.0	0.0	297.0	0.0	297.0
08/05/76	B	21:12	0.7	33.30	0.0	0.0	540.5	240.2	780.7
08/05/76	O	21:16	0.7	24.40	0.0	0.0	163.9	245.9	409.8
08/10/76	S	11:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	11:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	11:50	0.8	26.40	0.0	0.0	113.6	0.0	113.6
08/10/76	O	11:43	0.8	30.60	0.0	0.0	32.7	0.0	32.7
08/10/76	S	12:31	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	12:31	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	12:31	0.8	26.40	0.0	0.0	227.3	0.0	227.3
08/10/76	O	12:20	0.8	29.80	0.0	0.0	0.0	0.0	0.0
08/10/76	S	18:30	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/10/76	M	18:30	-0.2	38.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/10/76	B	18:30	-0.2	46.20	0.0	0.0	108.2	0.0	108.2
08/10/76	O	18:32	-0.2	32.40	0.0	0.0	30.9	0.0	30.9
08/10/76	S	19:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/10/76	M	19:25	0.0	32.70	0.0	0.0	61.2	0.0	61.2
08/10/76	B	19:25	0.0	41.10	0.0	0.0	1192.2	121.7	1313.9
08/10/76	O	19:26	0.0	32.40	0.0	0.0	92.6	0.0	92.6
08/10/76	S	23:17	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	23:17	0.8	24.60	0.0	0.0	122.0	0.0	122.0
08/10/76	B	23:17	0.8	26.40	0.0	0.0	1287.9	113.6	1401.5
08/10/76	O	23:19	0.8	32.50	0.0	0.0	92.3	61.5	153.8
08/11/76	S	00:18	0.9	22.50	0.0	0.0	44.4	0.0	44.4
08/11/76	M	00:18	0.9	24.60	0.0	0.0	243.9	0.0	243.9
08/11/76	B	00:18	0.9	26.40	0.0	0.0	719.7	0.0	719.7
08/11/76	O	00:19	0.9	33.50	0.0	0.0	29.9	29.9	59.8
08/11/76	S	04:37	0.2	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	04:37	0.2	32.70	0.0	0.0	275.2	0.0	275.2
08/11/76	B	04:37	0.2	-41.10	0.0	0.0	2408.8	1484.2	3893.0
08/11/76	O	04:39	0.2	32.40	0.0	0.0	30.9	30.9	61.8
08/11/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/11/76	M	05:25	0.0	32.70	0.0	0.0	91.7	30.6	122.3
08/11/76	B	05:25	0.0	41.10	0.0	0.0	1046.2	973.2	2019.4
08/11/76	O	05:31	0.0	29.60	0.0	0.0	168.9	67.6	236.5
08/17/76	S	10:56	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
08/17/76	M	10:56	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
08/17/76	B	10:56	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
08/17/76	O	10:59	-0.3	31.40	0.0	0.0	0.0	0.0	0.0
08/17/76	S	12:05	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/17/76	M	12:05	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/17/76	B	12:05	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/17/76	O	12:06	0.0	31.60	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/17/76	S	18:37	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/17/76	M	18:37	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/17/76	B	18:37	0.5	33.30	0.0	0.0	0.0	0.0	0.0
08/17/76	O	18:41	0.5	27.40	0.0	0.0	0.0	0.0	0.0
08/17/76	S	19:27	0.3	30.00	0.0	0.0	0.0	0.0	0.0
08/17/76	M	19:27	0.3	34.20	0.0	0.0	0.0	0.0	0.0
08/17/76	B	19:27	0.3	32.10	0.0	0.0	62.3	31.2	93.5
08/17/76	O	19:20	0.3	28.40	0.0	0.0	0.0	0.0	0.0
08/17/76	S	22:29	-0.1	31.80	0.0	0.0	0.0	31.4	31.4
08/17/76	M	22:29	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
08/17/76	B	22:29	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
08/17/76	O	22:23	-0.1	30.60	0.0	0.0	0.0	0.0	0.0
08/17/76	S	23:15	0.0	33.60	0.0	0.0	0.0	0.0	0.0
08/17/76	M	23:15	0.0	32.70	0.0	0.0	0.0	0.0	0.0
08/17/76	B	23:15	0.0	41.10	0.0	0.0	0.0	0.0	0.0
08/18/76	O	23:04	0.0	29.50	0.0	0.0	0.0	0.0	0.0
08/18/76	S	04:45	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/18/76	M	04:45	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/18/76	B	04:45	0.5	33.30	0.0	0.0	0.0	30.0	30.0
08/18/76	O	04:46	0.5	31.50	0.0	0.0	0.0	0.0	0.0
08/18/76	S	05:42	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/18/76	M	05:42	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/18/76	B	05:42	0.5	33.30	0.0	0.0	210.2	0.0	210.2
08/18/76	O	05:47	0.5	30.00	0.0	0.0	0.0	0.0	0.0
08/24/76	O	10:55	0.8	30.10	0.0	0.0	0.0	0.0	0.0
08/24/76	O	11:45	0.6	30.70	0.0	0.0	32.6	0.0	32.6
09/14/76	S	11:43	0.3	30.00	0.0	0.0	0.0	0.0	0.0
09/14/76	M	11:43	0.3	34.20	0.0	0.0	0.0	0.0	0.0
09/14/76	B	11:43	0.3	32.10	0.0	0.0	0.0	0.0	0.0
09/14/76	O	12:00	0.4	26.90	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

BAY ANCHOVY

DATE	DEPTH (A)	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
09/14/76	S	12:34	0.5	25.80	0.0	0.0	0.0	0.0	0.0
09/14/76	M	12:34	0.5	30.30	0.0	0.0	0.0	0.0	0.0
09/14/76	B	12:34	0.5	33.30	0.0	0.0	0.0	0.0	0.0
09/14/76	O	12:55	0.6	28.70	0.0	0.0	0.0	0.0	0.0
09/14/76	S	19:09	0.0	33.60	0.0	0.0	0.0	0.0	0.0
09/14/76	M	19:09	0.0	32.70	0.0	0.0	30.6	0.0	30.6
09/14/76	B	19:09	0.0	41.10	0.0	0.0	413.6	97.3	510.9
09/14/76	O	19:11	0.0	30.30	0.0	0.0	0.0	0.0	0.0
09/14/76	S	20:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
09/14/76	M	20:04	-0.2	38.40	0.0	0.0	104.2	0.0	104.2
09/14/76	B	20:04	-0.2	46.20	0.0	0.0	86.6	86.6	173.2
09/14/76	O	20:07	-0.2	30.30	0.0	0.0	33.0	0.0	33.0
09/14/76	S	23:58	0.2	33.60	0.0	0.0	0.0	0.0	0.0
09/14/76	M	23:58	0.2	32.70	0.0	0.0	91.7	0.0	91.7
09/14/76	B	23:58	0.2	41.10	0.0	0.0	243.3	73.0	316.3
09/15/76	S	01:32	0.5	25.80	0.0	0.0	0.0	0.0	0.0
09/15/76	M	01:32	0.5	30.30	0.0	0.0	231.0	0.0	231.0
09/15/76	B	01:32	0.5	33.30	0.0	0.0	240.2	0.0	240.2
09/15/76	O	01:45	0.5	21.80	0.0	0.0	0.0	0.0	0.0
09/15/76	S	06:10	0.1	33.60	0.0	0.0	0.0	0.0	0.0
09/15/76	M	06:10	0.1	32.70	0.0	0.0	30.6	0.0	30.6
09/15/76	B	06:10	0.1	41.10	0.0	0.0	146.0	0.0	146.0
09/15/76	O	06:10	0.1	16.00	0.0	0.0	0.0	0.0	0.0
09/15/76	S	07:04	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
09/15/76	M	07:04	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
09/15/76	B	07:04	-0.1	46.20	0.0	0.0	21.6	0.0	21.6
09/15/76	O	07:04	-0.1	12.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/20/76	B	23:55	0.1	41.10	0.0	0.0	0.0	0.0	0.0
04/21/76	S	04:37	0.7	25.80	0.0	0.0	0.0	0.0	0.0
04/21/76	M	04:37	0.7	30.30	0.0	0.0	0.0	0.0	0.0
04/21/76	B	04:37	0.7	33.30	0.0	0.0	0.0	0.0	0.0
04/21/76	S	05:15	0.6	25.80	0.0	0.0	0.0	0.0	0.0
04/21/76	M	05:15	0.6	30.30	0.0	0.0	0.0	0.0	0.0
04/21/76	B	05:15	0.6	33.30	0.0	0.0	0.0	0.0	0.0
04/27/76	S	14:25	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
04/24/76	M	14:25	-0.4	38.40	0.0	0.0	0.0	0.0	0.0
04/27/76	B	14:25	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
04/27/76	S	15:15	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
04/27/76	M	15:15	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
04/27/76	B	15:15	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
04/27/76	S	20:50	0.4	25.80	0.0	0.0	0.0	0.0	0.0
04/27/76	M	20:50	0.4	30.30	0.0	0.0	0.0	0.0	0.0
04/27/76	B	20:50	0.4	33.30	0.0	0.0	30.0	0.0	30.0
04/27/76	S	21:25	0.5	25.80	0.0	38.8	0.0	0.0	38.8
04/27/76	M	21:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
04/27/76	B	21:25	0.5	33.30	0.0	0.0	0.0	0.0	0.0
04/28/76	S	01:20	0.1	33.60	0.0	0.0	0.0	0.0	0.0
04/28/76	M	01:20	0.1	32.70	0.0	0.0	0.0	0.0	0.0
04/28/76	B	01:20	0.1	41.10	0.0	0.0	0.0	0.0	0.0
04/28/76	S	02:00	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	02:00	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
04/28/76	B	02:00	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
04/28/76	S	05:32	-0.4	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	05:23	-0.4	38.40	0.0	0.0	0.0	0.0	0.0
04/28/76	B	05:23	-0.4	46.20	0.0	0.0	0.0	0.0	0.0
04/28/76	S	06:09	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
04/28/76	M	06:09	-0.3	38.40	0.0	0.0	26.0	0.0	26.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/28/76	B	06:09	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	11:20	0.2	33.60	0.0	0.0	29.8	0.0	29.8
05/04/76	M	11:20	0.2	32.70	0.0	0.0	30.6	0.0	30.6
05/04/76	B	11:20	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/04/76	S	12:00	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/04/76	M	12:00	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/04/76	B	12:00	0.3	32.10	0.0	0.0	93.5	0.0	93.5
05/04/76	S	18:50	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
05/04/76	M	18:50	-0.2	38.40	0.0	0.0	52.1	0.0	52.1
05/04/76	B	18:50	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	19:35	-0.3	31.80	0.0	0.0	31.4	0.0	31.4
05/04/76	M	19:35	-0.3	38.40	0.0	26.0	0.0	0.0	26.0
05/04/76	B	19:35	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
05/04/76	S	23:47	0.2	33.60	0.0	0.0	208.3	0.0	208.3
05/04/76	M	23:47	0.2	32.70	0.0	0.0	61.2	0.0	61.2
05/04/76	B	23:47	0.6	33.30	0.0	0.0	90.1	0.0	90.1
05/05/76	S	00:37	0.6	25.80	0.0	0.0	0.0	0.0	0.0
05/05/76	M	00:37	0.6	30.30	0.0	0.0	132.0	0.0	132.0
05/05/76	B	00:37	0.5	33.30	0.0	0.0	90.1	0.0	90.1
05/05/76	S	05:00	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/05/76	M	05:00	0.5	30.30	0.0	0.0	33.0	0.0	33.0
05/05/76	B	05:00	0.3	32.10	0.0	0.0	31.2	0.0	31.2
05/05/76	S	05:47	0.3	30.00	0.0	0.0	33.3	0.0	33.3
05/05/76	M	05:47	0.3	34.20	0.0	87.7	0.0	0.0	87.7
05/05/76	B	05:47	0.2	41.10	0.0	0.0	24.3	0.0	24.3
05/11/76	S	10:45	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/11/76	M	10:45	0.5	30.30	0.0	0.0	33.0	0.0	33.0
05/11/76	B	10:45	0.5	33.30	0.0	0.0	30.0	0.0	30.0
05/11/76	S	11:32	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/11/76	M	11:32	0.3	34.20	0.0	0.0	29.2	0.0	29.2

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/11/76	B	11:32	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/11/76	S	18:50	0.7	25.80	0.0	0.0	77.5	0.0	77.5
05/11/76	M	18:50	0.7	30.30	0.0	0.0	0.0	0.0	0.0
05/11/76	B	18:50	0.9	26.40	0.0	0.0	37.9	0.0	37.9
05/11/76	S	19:28	0.9	22.50	0.0	0.0	0.0	0.0	0.0
05/11/76	M	19:28	0.9	24.60	0.0	0.0	0.0	0.0	0.0
05/11/76	B	19:28	0.9	26.40	0.0	0.0	37.9	0.0	37.9
05/11/76	S	23:25	0.8	22.50	0.0	0.0	88.8	0.0	88.8
05/11/76	M	23:25	0.8	24.60	0.0	0.0	0.0	0.0	0.0
05/11/76	B	23:25	0.6	33.30	0.0	30.0	30.0	0.0	60.0
05/12/76	S	00:17	0.6	25.80	0.0	0.0	77.5	0.0	77.5
05/12/76	M	00:17	0.6	30.30	0.0	0.0	0.0	0.0	0.0
05/12/76	B	00:17	0.4	33.30	0.0	0.0	90.1	0.0	90.1
05/12/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
05/12/76	M	05:25	0.0	32.70	0.0	0.0	0.0	0.0	0.0
05/12/76	B	05:25	0.0	41.10	0.0	48.7	0.0	0.0	48.7
05/12/76	S	06:25	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/12/76	M	06:25	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/12/76	B	06:25	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	10:20	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
05/18/76	M	10:20	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
05/18/76	B	10:20	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
05/18/76	S	11:00	0.1	33.60	0.0	0.0	29.8	0.0	29.8
05/18/76	M	11:00	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/18/76	B	11:00	0.1	41.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	18:22	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	18:22	0.3	34.20	0.0	29.2	0.0	0.0	29.2
05/18/76	B	18:22	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/18/76	S	19:09	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/18/76	M	19:09	0.3	34.20	0.0	0.0	29.2	0.0	29.2

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/18/76	B	19:09	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/19/76	S	00:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
05/19/76	M	00:10	0.3	34.20	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:10	0.3	32.10	0.0	0.0	0.0	0.0	0.0
05/19/76	S	00:55	0.5	25.80	0.0	0.0	38.8	0.0	38.8
05/19/76	M	00:55	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	00:55	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/19/76	S	05:10	0.7	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	05:10	0.7	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	05:10	0.7	33.30	0.0	0.0	0.0	0.0	0.0
05/19/76	S	06:03	0.4	25.80	0.0	0.0	0.0	0.0	0.0
05/19/76	M	06:03	0.4	30.30	0.0	0.0	0.0	0.0	0.0
05/19/76	B	06:03	0.4	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	S	10:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
05/25/76	M	10:40	0.5	30.30	0.0	0.0	66.0	0.0	66.0
05/25/76	B	10:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	10:40	0.5	28.60	0.0	0.0	0.0	0.0	0.0
05/25/76	S	11:30	0.4	25.80	0.0	0.0	38.8	0.0	38.8
05/25/76	M	11:30	0.4	30.30	0.0	0.0	396.0	0.0	396.0
05/25/76	B	11:30	0.4	33.30	0.0	0.0	0.0	0.0	0.0
05/25/76	O	11:30	0.4	28.50	0.0	0.0	35.1	0.0	35.1
05/25/76	S	19:18	0.8	22.50	0.0	0.0	133.3	0.0	133.3
05/25/76	M	19:18	0.8	24.60	0.0	0.0	203.3	0.0	203.3
05/25/76	B	19:18	0.8	26.40	0.0	0.0	151.5	0.0	151.5
05/25/76	O	19:09	0.8	28.50	0.0	0.0	0.0	0.0	0.0
05/25/76	S	20:02	1.1	22.50	0.0	44.4	0.0	0.0	44.4
05/25/76	M	20:02	1.1	24.60	0.0	40.7	40.7	0.0	81.4
05/25/76	B	20:02	1.1	26.40	0.0	37.9	37.9	0.0	75.8
05/25/76	O	20:00	1.1	28.50	0.0	0.0	35.1	0.0	35.1
05/26/76	S	00:29	0.5	25.80	0.0	0.0	38.8	0.0	38.8

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
05/26/76	M	00:29	0.5	30.30	0.0	0.0	0.0	0.0	0.0
05/26/76	B	00:29	0.5	33.30	0.0	0.0	0.0	0.0	0.0
05/26/76	O	00:20	0.5	29.40	0.0	0.0	102.0	0.0	102.0
05/26/76	S	01:15	0.2	33.60	0.0	0.0	0.0	0.0	0.0
05/26/76	M	01:15	0.2	32.70	0.0	0.0	30.6	0.0	30.6
05/26/76	B	01:15	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	01:18	0.2	28.50	0.0	0.0	0.0	0.0	0.0
05/26/76	S	04:44	0.1	33.60	0.0	0.0	0.0	0.0	0.0
05/26/76	M	04:44	0.1	32.70	0.0	0.0	0.0	0.0	0.0
05/26/76	B	04:44	0.1	41.10	0.0	0.0	24.3	0.0	24.3
05/26/76	O	04:39	0.1	28.50	0.0	0.0	35.1	0.0	35.1
05/26/76	S	05:29	0.2	33.60	0.0	0.0	29.8	0.0	29.8
05/26/76	M	05:28	0.2	32.70	0.0	30.6	0.0	0.0	30.6
05/26/76	B	05:28	0.2	41.10	0.0	0.0	0.0	0.0	0.0
05/26/76	O	05:35	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	12:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	12:18	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/01/76	B	12:18	0.7	33.30	0.0	0.0	30.0	0.0	30.0
06/01/76	O	12:16	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	13:11	0.8	22.50	0.0	0.0	44.4	0.0	44.4
06/01/76	M	13:11	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	13:11	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	O	13:14	0.8	28.50	0.0	0.0	35.1	0.0	35.1
06/01/76	S	18:35	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/01/76	M	18:35	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/01/76	B	18:35	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/01/76	O	18:32	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/01/76	S	21:12	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/01/76	M	21:12	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/01/76	B	21:12	0.2	41.10	0.0	0.0	97.3	0.0	97.3

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/01/76	O	21:15	0.2	28.50	0.0	0.0	105.3	0.0	105.3
06/01/76	S	23:50	0.8	22.50	0.0	0.0	44.4	0.0	44.4
06/01/76	M	23:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
06/01/76	B	23:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
06/01/76	O	23:53	0.8	28.50	0.0	0.0	35.1	0.0	35.1
06/02/76	S	00:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/02/76	M	00:49	0.8	24.60	0.0	0.0	81.3	0.0	81.3
06/02/76	B	00:49	0.8	26.40	0.0	0.0	151.5	0.0	151.5
06/02/76	O	00:50	0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	S	05:23	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/02/76	M	05:23	0.3	34.20	0.0	0.0	29.2	0.0	29.2
06/02/76	B	05:23	0.3	32.10	0.0	0.0	62.3	0.0	62.3
06/02/76	O	05:23	0.3	29.10	0.0	0.0	34.4	0.0	34.4
06/02/76	S	06:31	0.1	33.60	0.0	0.0	0.0	0.0	0.0
06/02/76	M	06:31	0.1	32.70	0.0	0.0	0.0	0.0	0.0
06/02/76	B	06:31	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/02/76	O	06:31	0.1	28.50	0.0	0.0	35.1	0.0	35.1
06/08/76	S	11:06	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	11:06	-0.1	38.40	0.0	0.0	26.0	0.0	26.0
06/08/76	B	11:06	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	11:05	-0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	12:08	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
06/08/76	M	12:08	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	12:08	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
06/08/76	O	12:05	-0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/08/76	S	20:16	0.9	22.50	0.0	0.0	0.0	0.0	0.0
06/08/76	M	20:16	0.9	24.60	0.0	0.0	0.0	0.0	0.0
06/08/76	B	20:16	0.9	26.40	0.0	0.0	37.9	0.0	37.9
06/08/76	O	20:16	0.9	28.50	0.0	0.0	35.1	0.0	35.1
06/08/76	S	21:16	-0.8	31.80	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/08/76	N	21:16	-0.8	38.40	0.0	0.0	0.0	0.0	0.0
06/08/76	B	21:16	-0.8	46.20	0.0	0.0	21.6	0.0	21.6
06/08/76	O	21:16	-0.8	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	00:02	0.2	33.60	0.0	0.0	0.0	0.0	0.0
06/09/76	M	00:02	0.2	32.70	0.0	0.0	0.0	0.0	0.0
06/09/76	B	00:02	0.2	41.10	0.0	0.0	24.3	0.0	24.3
06/09/76	O	00:02	0.2	28.50	0.0	0.0	35.1	0.0	35.1
06/09/76	S	01:22	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	01:22	-0.1	38.40	0.0	0.0	26.0	0.0	26.0
06/09/76	B	01:22	-0.1	46.20	0.0	0.0	0.0	0.0	0.0
06/09/76	O	01:10	-0.1	28.50	0.0	0.0	35.1	0.0	35.1
06/09/76	S	06:40	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/09/76	M	06:40	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	06:40	0.6	33.30	0.0	30.0	30.0	0.0	60.0
06/09/76	O	06:40	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/09/76	S	07:30	0.7	25.80	0.0	0.0	38.8	0.0	38.8
06/09/76	M	07:30	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/09/76	B	07:30	0.7	33.30	0.0	0.0	30.0	0.0	30.0
06/09/76	O	07:30	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	10:45	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	10:45	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	10:45	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	10:50	0.3	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	11:25	0.5	25.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	11:25	0.5	30.30	0.0	0.0	0.0	0.0	0.0
06/15/76	B	11:25	0.5	33.30	0.0	0.0	0.0	0.0	0.0
06/15/76	O	11:35	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/15/76	S	18:01	-0.1	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	18:01	-0.1	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	18:01	-0.1	46.20	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/15/76	O	17:54	-0.1	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	19:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/15/76	M	19:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/15/76	B	19:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/15/76	O	18:51	-0.2	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	S	23:05	0.3	30.00	0.0	0.0	0.0	0.0	0.0
06/15/76	M	23:05	0.3	34.20	0.0	0.0	0.0	0.0	0.0
06/15/76	B	23:05	0.3	32.10	0.0	0.0	0.0	0.0	0.0
06/15/76	O	23:09	0.3	27.60	0.0	0.0	0.0	0.0	0.0
06/16/76	S	00:00	0.6	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	00:00	0.6	30.30	0.0	0.0	0.0	0.0	0.0
06/16/76	B	00:00	0.6	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	00:09	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	25.80	0.0	0.0	0.0	0.0	0.0
06/16/76	M	04:48	0.4	30.30	0.0	0.0	0.0	0.0	0.0
06/16/76	B	04:48	0.4	33.30	0.0	0.0	0.0	0.0	0.0
06/16/76	O	04:40	0.4	23.30	0.0	0.0	0.0	0.0	0.0
06/16/76	S	05:25	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/16/76	M	05:25	0.0	32.70	0.0	0.0	30.6	0.0	30.6
06/16/76	B	05:25	0.0	41.10	0.0	0.0	24.3	0.0	24.3
06/16/76	O	05:38	0.0	29.40	0.0	0.0	0.0	0.0	0.0
06/22/76	S	10:47	0.0	33.60	0.0	0.0	0.0	0.0	0.0
06/22/76	M	10:47	0.0	32.70	0.0	0.0	0.0	0.0	0.0
06/22/76	B	10:47	0.0	41.10	0.0	0.0	0.0	0.0	0.0
06/22/76	O	10:40	0.0	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	11:44	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
06/22/76	M	11:44	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
06/22/76	B	11:44	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
06/22/76	O	11:51	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	20:09	0.7	15.00	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/22/76	M	20:09	0.7	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	20:09	0.7	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	20:09	0.7	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	21:17	0.6	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	21:17	0.6	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	21:17	0.6	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	21:17	0.6	28.50	0.0	0.0	0.0	0.0	0.0
06/22/76	S	23:25	0.5	15.00	0.0	0.0	0.0	0.0	0.0
06/22/76	M	23:25	0.5	18.60	0.0	0.0	0.0	0.0	0.0
06/22/76	B	23:25	0.5	24.60	0.0	0.0	0.0	0.0	0.0
06/22/76	O	23:25	0.5	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	00:27	0.1	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	00:27	0.1	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	00:27	0.1	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	04:40	0.2	30.30	0.0	0.0	0.0	0.0	0.0
06/23/76	B	04:40	0.2	21.00	0.0	0.0	0.0	0.0	0.0
06/23/76	O	04:45	0.2	28.50	0.0	0.0	0.0	0.0	0.0
06/23/76	S	05:25	0.3	18.00	0.0	0.0	0.0	0.0	0.0
06/23/76	M	05:25	0.3	24.45	0.0	0.0	0.0	0.0	0.0
06/23/76	B	05:25	0.3	22.80	0.0	0.0	0.0	0.0	0.0
06/23/76	O	05:35	0.3	28.70	0.0	0.0	0.0	0.0	0.0
06/30/76	S	11:49	0.7	23.80	0.0	0.0	0.0	0.0	0.0
06/30/76	M	11:49	0.7	30.30	0.0	0.0	0.0	0.0	0.0
06/30/76	B	11:49	0.7	33.30	0.0	0.0	0.0	0.0	0.0
06/30/76	O	11:49	0.7	28.50	0.0	0.0	105.3	0.0	105.3
06/30/76	S	12:49	0.8	22.50	0.0	0.0	0.0	0.0	0.0
06/30/76	M	12:49	0.8	24.60	0.0	0.0	81.3	0.0	81.3
06/30/76	B	12:49	0.8	26.40	0.0	0.0	303.0	0.0	303.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/30/76	O	12:49	0.8	28.50	0.0	0.0	0.0	0.0	0.0
07/01/76	S	00:25	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	00:25	1.1	24.60	0.0	0.0	81.3	0.0	81.3
07/01/76	B	00:25	1.1	26.40	0.0	0.0	0.0	0.0	0.0
07/01/76	S	01:02	1.1	22.50	0.0	0.0	0.0	0.0	0.0
07/01/76	M	01:02	1.1	24.60	0.0	0.0	0.0	0.0	0.0
07/01/76	B	01:02	1.1	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	S	11:05	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:05	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:05	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	11:00	-0.2	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	11:55	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/06/76	M	11:55	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/06/76	B	11:55	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/06/76	O	12:00	-0.2	28.50	0.0	0.0	35.1	0.0	35.1
07/06/76	S	19:04	1.0	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	19:04	1.0	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	19:04	1.0	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	18:45	1.0	28.50	0.0	0.0	0.0	0.0	0.0
07/06/76	S	20:04	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/06/76	M	20:04	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/06/76	B	20:04	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/06/76	O	19:32	0.8	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	S	00:04	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:04	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:04	0.1	41.10	0.0	0.0	0.0	0.0	0.0
07/06/76	O	23:47	0.1	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	S	00:46	0.1	33.60	0.0	0.0	0.0	0.0	0.0
07/07/76	M	00:46	0.1	32.70	0.0	0.0	0.0	0.0	0.0
07/07/76	B	00:46	0.1	41.10	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
07/07/76	O	00:58	0.1	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	S	04:02	0.3	30.00	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:02	0.3	34.20	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:02	0.3	32.10	0.0	0.0	31.2	0.0	31.2
07/07/76	O	04:00	0.3	28.50	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	25.80	0.0	0.0	0.0	0.0	0.0
07/07/76	M	04:40	0.5	30.30	0.0	0.0	0.0	0.0	0.0
07/07/76	B	04:40	0.5	33.30	0.0	0.0	0.0	0.0	0.0
07/07/76	O	04:50	0.5	29.70	0.0	0.0	33.7	0.0	33.7
07/13/76	S	11:44	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	11:44	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	11:44	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	11:44	0.8	27.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	12:58	0.8	22.50	0.0	0.0	0.0	0.0	0.0
07/13/76	M	12:58	0.8	24.60	0.0	0.0	0.0	0.0	0.0
07/13/76	B	12:58	0.8	26.40	0.0	0.0	0.0	0.0	0.0
07/13/76	O	13:00	0.8	33.00	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:04	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:04	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:04	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	18:04	-0.2	28.40	0.0	0.0	0.0	0.0	0.0
07/13/76	S	18:56	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	18:56	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
07/13/76	B	18:56	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
07/13/76	O	19:03	-0.2	25.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	22:46	0.7	25.80	0.0	0.0	0.0	0.0	0.0
07/13/76	M	22:46	0.7	30.30	0.0	0.0	0.0	0.0	0.0
07/13/76	B	22:46	0.7	33.30	0.0	0.0	0.0	30.0	30.0
07/13/76	O	22:39	0.7	28.50	0.0	0.0	0.0	0.0	0.0
07/13/76	S	23:35	0.9	22.50	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/03/76	S	12:13	-0.3	31.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	12:13	-0.3	38.40	0.0	0.0	0.0	0.0	0.0
08/03/76	B	12:13	-0.3	46.20	0.0	0.0	0.0	0.0	0.0
08/03/76	O	13:02	-0.1	30.20	0.0	0.0	0.0	0.0	0.0
08/03/76	S	18:56	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	18:56	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/03/76	B	18:56	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/03/76	S	19:37	0.5	25.30	0.0	0.0	0.0	0.0	0.0
08/03/76	M	19:37	0.5	30.30	0.0	0.0	0.0	0.0	0.0
08/03/76	B	19:37	0.5	33.30	0.0	0.0	0.0	0.0	0.0
08/03/76	S	23:26	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/03/76	M	23:26	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
08/03/76	B	23:26	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/03/76	O	23:30	-0.2	32.20	0.0	0.0	0.0	0.0	0.0
08/04/76	S	00:10	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	00:10	-0.2	38.40	0.0	0.0	0.0	0.0	0.0
08/04/76	B	00:10	-0.2	46.20	0.0	0.0	0.0	0.0	0.0
08/04/76	O	00:25	-0.2	30.40	0.0	0.0	0.0	32.9	32.9
08/04/76	S	05:18	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	05:18	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	05:18	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	S	06:03	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	06:03	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/04/76	B	06:03	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/04/76	S	15:10	0.3	30.00	0.0	0.0	0.0	0.0	0.0
08/04/76	M	15:10	0.3	34.20	0.0	0.0	0.0	0.0	0.0
08/04/76	B	15:10	0.3	32.10	0.0	0.0	0.0	0.0	0.0
08/04/76	O	15:15	0.3	33.00	0.0	0.0	0.0	0.0	0.0
08/04/76	B	16:02	0.5	25.80	0.0	0.0	0.0	0.0	0.0
08/04/76	M	16:02	0.5	30.30	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

CLUPEIDAE FAMILY

DATE	(A) DEPTH	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/05/76	S	16:34	0.4	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	16:34	0.4	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	16:34	0.4	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	16:41	0.4	31.10	0.0	0.0	0.0	0.0	0.0
08/05/76	S	17:39	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	17:39	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	17:39	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	17:32	0.7	33.10	0.0	0.0	0.0	0.0	0.0
08/05/76	S	19:28	0.9	22.50	0.0	0.0	0.0	0.0	0.0
08/05/76	M	19:28	0.9	24.60	0.0	0.0	0.0	0.0	0.0
08/05/76	B	19:28	0.9	26.40	0.0	0.0	0.0	0.0	0.0
08/05/76	O	19:33	0.9	28.60	0.0	0.0	0.0	35.0	35.0
08/05/76	S	20:30	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/05/76	M	20:30	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/05/76	B	20:30	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/05/76	O	20:21	0.8	24.00	0.0	0.0	0.0	0.0	0.0
08/05/76	S	21:12	0.7	25.80	0.0	0.0	0.0	0.0	0.0
08/05/76	M	21:12	0.7	30.30	0.0	0.0	0.0	0.0	0.0
08/05/76	B	21:12	0.7	33.30	0.0	0.0	0.0	0.0	0.0
08/05/76	O	21:14	0.7	24.40	0.0	0.0	0.0	0.0	0.0
08/10/76	S	11:50	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	11:50	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	11:50	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	11:43	0.8	30.60	0.0	0.0	0.0	0.0	0.0
08/10/76	S	12:31	0.8	22.50	0.0	0.0	0.0	0.0	0.0
08/10/76	M	12:31	0.8	24.60	0.0	0.0	0.0	0.0	0.0
08/10/76	B	12:31	0.8	26.40	0.0	0.0	0.0	0.0	0.0
08/10/76	O	12:20	0.8	29.80	0.0	0.0	0.0	0.0	0.0
08/10/76	S	18:30	-0.2	31.80	0.0	0.0	0.0	0.0	0.0
08/10/76	M	18:30	-0.2	38.40	0.0	0.0	0.0	0.0	0.0

(A): S=SURFACE; M=MIDDLE; B=BOTTOM; O=OBLIQUE

3.3 BOWLINE POINT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (DISCHARGE PUMP), 1976

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:09	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	37.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:03	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.40	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04.25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:59	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	33.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	97.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10.55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12.09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.60	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00.30	0.0	25.60	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	93.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5410.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	31.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:03	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12.09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:03	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:55	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	38.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	36.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	26.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	27.1	0.0	27.1
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	68.0	0.0	68.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	50.9	0.0	50.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	13.3	0.0	13.3
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	42.3	0.0	42.3
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	19.5	39.1	0.0	58.6
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	35.9	0.0	35.9
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	34.9	0.0	34.9
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	52.7	0.0	52.7
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	0.0	31.4
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	11.4	11.4

WHITE PERCH

DATE	TIME (HR MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/26	21:28	0.9	114.70	-9.9	-9999.	0.0	0.0	0.0	8.7	8.7
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	19:46	0.2	28.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/27	22:50	0.9	30.20	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/28	00:05	1.0	34.40	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	0.0	29.2	29.2
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	184.4	0.0	184.4
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	162.6	0.0	162.6
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	181.4	0.0	181.4
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	12.8	0.0	12.8
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	101.9	0.0	101.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	56.4	0.0	56.4
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	28.4	0.0	28.4
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	122.2	0.0	122.2
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	122.1	0.0	122.1
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	43.2	0.0	43.2
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	17.6	0.0	17.6
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	31.4	15.7	47.1
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	0.0	35.9	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	18.0	0.0	18.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	44.4	0.0	44.4
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	15.3	0.0	15.3
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	26.8	0.0	26.8
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	15.7	0.0	15.7
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	66.8	0.0	66.8
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	35.9	0.0	35.9
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	10.9	0.0	10.9
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	24.4	0.0	24.4
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	45.6	0.0	45.6

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/20	10:55	-0.2	15.50	28.0	-9999.	0.0	0.0	64.5	0.0	64.5
76/07/20	11:34	-0.2	13.80	29.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:09	-0.3	12.80	30.0	-9999.	0.0	0.0	78.1	0.0	78.1
76/07/20	12:47	-0.3	12.80	30.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/20	19:35	0.5	26.70	-9.9	-9999.	0.0	37.5	37.5	0.0	75.0
76/07/20	20:50	0.2	27.10	-9.9	-9999.	0.0	0.0	553.5	184.5	738.0
76/07/20	23:17	0.0	25.90	-9.9	-9999.	0.0	0.0	386.1	77.2	463.3
76/07/21	00:30	0.0	25.80	-9.9	-9999.	0.0	0.0	465.1	193.8	658.9
76/07/21	04:40	0.1	32.70	26.0	-9999.	0.0	0.0	305.8	0.0	305.8
76/07/21	05:50	0.2	32.40	26.0	-9999.	0.0	0.0	246.9	0.0	246.9
76/07/26	17:51	-0.2	95.40	-9.9	-9999.	10.5	0.0	471.7	94.3	566.0
76/07/26	21:38	0.9	114.70	-9.9	-9999.	0.0	0.0	871.8	1046.2	1918.0
76/07/27	18:30	-0.1	23.70	25.0	-9999.	0.0	0.0	843.9	42.2	886.1
76/07/27	19:46	0.2	28.70	25.0	-9999.	209.1	0.0	348.4	418.1	766.5
76/07/27	22:50	0.9	30.20	25.0	-9999.	66.2	0.0	761.6	662.3	1423.9
76/07/28	00:05	1.0	34.40	25.0	-9999.	87.2	87.2	610.5	872.1	1569.8
76/08/02	11:45	-0.1	16.50	25.0	-9999.	0.0	0.0	606.1	0.0	606.1
76/08/02	13:45	0.4	19.50	25.5	-9999.	0.0	51.3	564.1	0.0	615.4
76/08/02	14:40	0.7	19.20	25.5	-9999.	0.0	0.0	1145.8	0.0	1145.8
76/08/02	15:30	0.9	19.90	25.5	-9999.	0.0	0.0	1256.3	0.0	1256.3
76/08/03	11:12	-0.4	32.60	25.0	-9999.	0.0	0.0	521.5	0.0	521.5
76/08/03	12:18	-0.3	31.70	25.0	-9999.	0.0	0.0	473.2	0.0	473.2
76/08/03	18:58	0.7	38.40	25.5	-9999.	0.0	104.2	599.0	0.0	703.2
76/08/03	20:15	0.5	35.60	25.5	-9999.	0.0	280.9	477.5	84.3	842.7
76/08/03	23:26	-0.2	34.00	25.0	-9999.	0.0	0.0	1029.4	411.8	1441.2
76/08/04	00:38	-0.2	34.20	25.0	-9999.	0.0	0.0	467.8	233.9	701.7
76/08/04	04:25	0.7	30.90	25.0	-9999.	0.0	0.0	1197.4	129.4	1326.8
76/08/04	05:32	0.7	31.50	25.0	-9999.	0.0	0.0	793.7	31.7	825.4
76/08/04	15:07	0.3	15.70	26.0	-9999.	0.0	0.0	191.1	0.0	191.1
76/08/04	15:58	0.5	16.40	26.0	-9999.	0.0	0.0	0.0	0.0	0.0

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/04	16:43	0.8	16.10	26.5	-9999.	0.0	0.0	124.2	0.0	124.2
76/08/04	17:36	0.8	16.40	26.5	-9999.	0.0	0.0	122.0	0.0	122.0
76/08/04	19:20	0.8	18.60	26.0	-9999.	0.0	0.0	215.1	0.0	215.1
76/08/04	20:10	0.7	14.70	26.0	-9999.	0.0	0.0	340.1	0.0	340.1
76/08/04	20:52	0.5	14.10	26.0	-9999.	0.0	0.0	425.5	141.8	567.3
76/08/05	14:54	-0.1	12.90	26.0	-9999.	0.0	0.0	77.5	0.0	77.5
76/08/05	15:49	0.2	13.30	26.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/05	16:34	0.4	13.80	26.0	-9999.	0.0	0.0	217.4	0.0	217.4
76/08/05	17:39	0.7	14.60	26.0	-9999.	0.0	0.0	411.0	0.0	411.0
76/08/05	19:28	0.9	14.50	26.0	-9999.	0.0	0.0	551.7	0.0	551.7
76/08/05	20:23	0.8	14.50	26.0	-9999.	0.0	0.0	827.6	275.9	1103.5
76/08/05	21:16	0.8	14.30	26.0	-9999.	0.0	0.0	559.4	209.8	769.2
76/08/17	11:22	-0.3	37.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	12:33	0.0	30.00	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	18:39	0.5	32.50	26.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/17	19:50	0.3	32.00	26.0	-9999.	0.0	0.0	0.0	62.5	62.5
76/08/17	22:22	-0.1	31.20	25.5	-9999.	0.0	0.0	0.0	64.1	64.1
76/08/17	23:30	0.0	29.30	25.5	-9999.	0.0	0.0	102.4	0.0	102.4
76/08/18	04:41	0.5	34.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/18	05:47	0.5	33.60	25.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/08/24	18:50	0.8	124.00	25.5	-9999.	0.0	0.0	32.3	0.0	32.3
76/08/24	22:50	0.8	28.80	25.0	-9999.	0.0	0.0	104.2	0.0	104.2
76/08/25	05:16	-0.3	27.40	24.0	5800.	0.0	0.0	0.0	73.0	73.0
76/08/31	10:55	-0.3	33.00	23.2	4500.	0.0	0.0	0.0	0.0	0.0
76/08/31	18:19	-9.9	32.60	24.0	5270.	0.0	0.0	30.7	0.0	30.7
76/08/31	23:03	-0.1	32.70	23.8	5610.	0.0	0.0	397.6	0.0	397.6
76/09/01	05:53	0.8	37.50	23.2	5070.	0.0	0.0	133.3	0.0	133.3
76/09/07	11:49	-9.9	38.10	-9.9	-9999.	0.0	0.0	105.0	26.2	131.2
76/09/07	18:45	-0.2	33.00	23.1	3740.	0.0	0.0	303.0	60.6	363.6
76/09/07	22:24	0.8	32.40	22.9	3700.	0.0	0.0	30.9	0.0	30.9

BAY ANCHOVY

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/09/08	05:44	0.2	33.90	22.4	3480.	0.0	0.0	147.5	29.5	177.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	18:50	-0.1	36.60	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	16:44	0.6	48.80	22.0	-9999.	0.0	0.0	20.5	0.0	20.5
76/06/17	20:32	-0.2	36.90	21.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/17	23:02	-0.3	44.10	21.0	-9999.	0.0	0.0	22.7	0.0	22.7
76/06/21	18:43	0.8	78.40	32.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/21	23:06	0.3	58.90	28.0	-9999.	0.0	0.0	67.9	0.0	67.9
76/06/22	17:54	0.7	75.10	33.0	-9999.	0.0	0.0	26.6	0.0	26.6
76/06/22	22:13	0.6	70.90	32.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	16:37	0.1	62.10	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/23	21:08	0.8	70.50	33.0	-9999.	0.0	0.0	14.2	0.0	14.2
76/06/24	17:10	0.0	56.60	34.0	-9999.	0.0	0.0	17.7	0.0	17.7
76/06/24	20:42	0.8	51.20	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	17:24	0.2	55.70	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/30	21:16	0.2	57.30	34.0	-9999.	0.0	0.0	17.5	0.0	17.5
76/07/01	16:29	0.3	67.50	35.0	-9999.	0.0	0.0	14.8	0.0	14.8
76/07/01	21:05	0.1	65.50	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	16:53	0.6	37.30	33.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/06	21:04	0.8	46.30	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	17:41	0.8	37.30	34.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/07	21:45	0.8	56.90	34.5	-9999.	0.0	0.0	35.1	0.0	35.1
76/07/08	16:35	0.1	58.40	37.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/08	21:00	0.1	63.60	31.0	-9999.	0.0	0.0	47.2	0.0	47.2
76/07/12	16:39	0.0	59.90	34.5	-9999.	0.0	0.0	0.0	16.7	16.7
76/07/12	22:00	0.7	55.70	30.5	-9999.	0.0	0.0	89.8	0.0	89.8
76/07/13	17:15	-0.1	101.40	31.0	-9999.	0.0	0.0	9.9	0.0	9.9
76/07/13	22:00	0.6	91.90	30.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	16:35	0.3	81.00	34.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/14	21:33	-0.2	81.90	32.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/15	16:57	0.5	103.20	35.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/15	20:40	-9.9	87.70	-9.9	-9999.	0.0	0.0	0.0	0.0	0.0

3.4 LOVETT GENERATING STATION ENTRAINMENT ABUNDANCE RAW DATA SUMMARIES (NETS), 1976

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/04	13:56	-0.2	71.10	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:56	-0.2	82.20	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	82.20	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	45.30	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	85.80	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	85.80	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	69.30	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	21:30	0.4	69.30	14.3	120.	0.0	0.0	14.4	0.0	14.4

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/11	21:30	0.4	71.10	14.3	120.	0.0	0.0	14.1	0.0	14.1
76/05/11	21:30	0.4	82.20	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	69.30	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	39.00	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	45.30	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	32.40	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	39.00	14.4	100.	51.3	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	45.30	14.4	100.	66.2	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	32.40	16.4	130.	0.0	61.7	0.0	0.0	61.7
76/05/12	07:35	-0.1	39.00	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	45.30	16.4	130.	0.0	0.0	22.1	0.0	22.1
76/05/12	08:19	0.1	69.30	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	08:19	0.1	71.10	16.4	130.	0.0	0.0	28.1	0.0	28.1
76/05/12	08:19	0.1	82.20	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/18	21:44	-0.7	42.90	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	21:47	-0.7	59.70	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	21:47	-0.7	76.20	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	22:44	-0.7	42.90	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	22:44	-0.7	59.70	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	22:44	-0.7	76.20	15.1	120.	0.0	0.0	13.1	0.0	13.1
76/05/19	02:55	0.1	32.40	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	39.00	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	45.30	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	03:42	0.5	32.40	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	03:42	0.5	39.00	14.4	130.	0.0	25.6	0.0	0.0	25.6
76/05/19	03:42	0.5	45.30	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	07:14	-0.6	42.90	16.5	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	07:14	-0.6	59.70	16.5	130.	0.0	0.0	16.8	0.0	16.8
76/05/19	07:14	-0.6	76.20	16.5	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	08:10	-0.8	83.70	16.5	130.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/19	08:10	-0.8	85.80	16.5	130.	0.0	0.0	11.7	0.0	11.7
76/05/19	08:10	-0.8	90.30	16.5	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	83.70	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	85.80	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	90.30	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:30	-0.8	83.70	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:30	-0.8	85.80	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:30	-0.8	90.30	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	42.90	19.6	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	59.70	19.6	140.	16.8	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	76.20	19.6	140.	13.1	0.0	0.0	0.0	0.0
76/05/25	14:15	-0.7	42.90	19.6	140.	23.3	0.0	0.0	0.0	0.0
76/05/25	14:15	-0.7	59.70	19.6	140.	0.0	0.0	16.8	0.0	16.8
76/05/25	14:15	-0.7	76.20	19.6	140.	13.1	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	39.60	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	45.30	21.1	140.	44.2	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	39.60	21.1	140.	0.0	0.0	25.6	0.0	25.6
76/05/25	22:12	0.3	45.30	21.1	140.	0.0	0.0	22.1	0.0	22.1
76/05/26	00:44	-0.3	32.40	16.8	120.	0.0	0.0	61.7	0.0	61.7
76/05/26	00:44	-0.3	39.60	16.8	120.	0.0	0.0	25.6	0.0	25.6
76/05/26	00:44	-0.3	45.30	16.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/26	01:25	-0.3	32.40	16.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/26	01:25	-0.3	39.60	16.8	120.	0.0	0.0	51.3	0.0	51.3
76/05/26	01:25	-0.3	45.30	16.8	120.	0.0	0.0	44.2	0.0	44.2
76/05/26	07:07	-0.3	32.40	19.1	130.	0.0	0.0	61.7	0.0	61.7
76/05/26	07:07	-0.3	39.60	19.1	130.	0.0	0.0	25.6	0.0	25.6
76/05/26	07:07	-0.3	45.30	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/26	07:46	-0.1	32.40	19.1	130.	0.0	0.0	61.7	0.0	61.7

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	07:46	-0.1	38.00	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/26	07:45	-0.1	45.30	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/01	15:07	0.0	52.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/05/01	15:07	0.0	44.40	17.4	150.	22.5	0.0	0.0	0.0	0.0
76/05/01	15:07	0.0	49.50	17.4	150.	20.2	0.0	0.0	0.0	0.0
76/05/01	15:45	0.0	52.50	17.4	150.	0.0	0.0	19.0	0.0	19.0
76/05/01	15:45	0.0	44.40	17.4	150.	0.0	0.0	22.5	0.0	22.5
76/05/01	15:45	0.0	49.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/05/08	11:31	-0.8	83.70	20.7	150.	11.9	0.0	0.0	0.0	0.0
76/05/08	11:31	-0.8	85.80	20.7	150.	23.3	0.0	11.7	0.0	11.7
76/05/08	11:31	-0.8	90.30	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/05/15	12:14	-0.9	83.70	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/05/15	12:14	-0.9	85.80	20.7	150.	35.0	0.0	0.0	0.0	0.0
76/05/15	12:14	-0.9	90.30	20.7	150.	11.1	0.0	0.0	0.0	0.0
76/06/08	18:00	0.0	69.30	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:00	0.0	71.10	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:00	0.0	82.20	17.9	140.	12.2	0.0	12.2	0.0	12.2
76/06/08	18:44	0.1	32.40	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	39.00	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	45.30	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	42.90	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	59.70	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	76.20	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	42.90	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	59.70	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	76.20	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/15	13:20	0.0	69.30	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	13:20	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	13:20	0.0	82.20	19.5	150.	12.2	0.0	0.0	0.0	0.0
76/06/15	14:00	0.0	69.30	19.5	150.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	14:00	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	14:00	0.0	82.20	19.5	150.	12.2	0.0	0.0	0.0	0.0
76/06/15	20:28	-1.0	83.70	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	20:28	-1.0	85.80	20.4	160.	0.0	0.0	23.3	0.0	23.3
76/06/15	20:28	-1.0	90.30	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	21:10	-1.0	83.70	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	21:10	-1.0	85.80	20.4	160.	0.0	0.0	35.0	0.0	35.0
76/06/15	21:10	-1.0	90.30	20.4	160.	11.1	0.0	0.0	0.0	0.0
76/06/15	23:39	0.0	52.50	19.7	150.	19.0	0.0	19.0	0.0	19.0
76/06/16	00:39	0.0	44.40	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	00:39	0.0	49.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	52.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	44.40	19.7	150.	0.0	0.0	22.5	0.0	22.5
76/06/16	01:20	0.2	49.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	42.90	20.0	170.	116.6	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	59.70	20.0	170.	117.3	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	76.20	20.0	170.	52.5	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	83.70	20.0	170.	83.6	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	85.80	20.0	170.	69.9	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	90.30	20.0	170.	110.7	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	69.30	21.9	140.	0.0	0.0	28.9	0.0	28.9
76/06/22	19:17	0.0	71.10	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:59	0.0	69.30	21.9	140.	0.0	0.0	14.4	0.0	14.4

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	14:00	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	14:00	0.0	82.20	19.5	150.	12.2	0.0	0.0	0.0	0.0
76/06/15	20:28	-1.0	83.70	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	20:28	-1.0	85.80	20.4	160.	0.0	0.0	23.3	0.0	23.3
76/06/15	20:28	-1.0	90.30	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	21:10	-1.0	83.70	20.4	160.	0.0	0.0	0.0	0.0	0.0
76/06/15	21:10	-1.0	85.80	20.4	160.	0.0	0.0	35.0	0.0	35.0
76/06/15	21:10	-1.0	90.30	20.4	160.	11.1	0.0	0.0	0.0	0.0
76/06/16	00:39	0.0	52.50	19.7	150.	19.0	0.0	19.0	0.0	19.0
76/06/16	00:39	0.0	44.40	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	00:39	0.0	49.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	52.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	44.40	19.7	150.	0.0	0.0	22.5	0.0	22.5
76/06/16	01:20	0.2	49.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	42.90	20.0	170.	116.6	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	59.70	20.0	170.	117.3	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	76.20	20.0	170.	52.5	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	83.70	20.0	170.	83.6	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	85.80	20.0	170.	69.9	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	90.30	20.0	170.	110.7	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	69.30	21.9	140.	0.0	0.0	28.9	0.0	28.9
76/06/22	19:17	0.0	71.10	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:59	0.0	69.30	21.9	140.	0.0	0.0	14.4	0.0	14.4

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/22	19:59	0.0	71.10	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:59	0.0	82.20	21.9	140.	0.0	0.0	12.2	0.0	12.2
76/06/22	23:22	-0.4	32.40	22.8	160.	0.0	0.0	30.9	0.0	30.9
76/06/22	23:22	-0.4	39.00	22.8	160.	0.0	0.0	76.9	0.0	76.9
76/06/22	23:22	-0.4	45.30	22.8	160.	0.0	0.0	66.2	0.0	66.2
76/06/23	00:03	-0.5	42.90	22.8	160.	0.0	0.0	23.3	0.0	23.3
76/06/23	00:03	-0.5	59.70	22.8	160.	0.0	0.0	16.8	0.0	16.8
76/06/23	00:03	-0.5	76.20	22.8	160.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	39.00	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	45.30	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	39.60	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	45.30	22.2	150.	44.2	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	71.10	23.5	990.	0.0	0.0	42.2	0.0	42.2
76/06/30	15:47	-0.2	82.20	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	71.10	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	82.20	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	22:24	-0.2	69.30	24.0	-9999.	0.0	0.0	14.4	0.0	14.4
76/06/30	22:24	-0.2	71.10	24.0	-9999.	0.0	0.0	14.1	0.0	14.1
76/06/30	22:24	-0.2	82.20	24.0	-9999.	0.0	0.0	36.5	0.0	36.5
76/06/30	23:06	0.0	69.30	24.0	-9999.	0.0	0.0	43.3	0.0	43.3
76/06/30	23:06	0.0	71.10	24.0	-9999.	0.0	0.0	14.1	0.0	14.1
76/06/30	23:06	0.0	82.20	24.0	-9999.	0.0	0.0	12.2	0.0	12.2
76/07/13	14:24	-0.1	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	44.40	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	49.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	15:08	-0.2	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/07/13	15:08	-0.2	44.40	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	15:08	-0.2	49.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	20:35	-0.7	71.70	25.2	210.	0.0	0.0	0.0	0.0	0.0
76/07/13	20:35	-0.7	55.20	25.2	210.	0.0	0.0	18.1	0.0	18.1
76/07/13	20:35	-0.7	59.40	25.2	210.	0.0	0.0	67.3	0.0	67.3
76/07/13	21:23	-0.4	52.50	25.2	210.	0.0	0.0	0.0	0.0	0.0
76/07/13	21:23	-0.4	44.40	25.2	210.	0.0	0.0	22.5	0.0	22.5
76/07/13	21:23	-0.4	49.50	25.2	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	00:40	0.3	52.50	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	00:40	0.3	44.40	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	00:40	0.3	49.50	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	01:19	0.3	52.50	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	01:19	0.3	44.40	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	01:19	0.3	49.50	25.9	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	07:25	-0.8	71.70	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	07:25	-0.8	55.20	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	07:25	-0.8	59.40	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:05	-0.9	71.70	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:05	-0.9	55.20	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/14	08:05	-0.9	59.40	25.7	210.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:12	-1.0	83.70	26.7	400.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:12	-1.0	85.80	26.7	400.	0.0	0.0	0.0	0.0	0.0
76/07/20	12:12	-1.0	90.30	26.7	400.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:10	-0.6	83.70	27.5	1215.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:10	-0.6	85.80	27.5	1215.	0.0	0.0	0.0	0.0	0.0
76/07/20	23:10	-0.6	90.30	27.5	1215.	0.0	0.0	0.0	0.0	0.0
76/07/21	06:49	-0.2	52.50	25.8	1240.	0.0	0.0	0.0	0.0	0.0
76/07/21	06:49	-0.2	44.40	25.8	1240.	0.0	0.0	0.0	0.0	0.0
76/07/21	06:49	-0.2	49.50	25.8	1240.	0.0	0.0	0.0	0.0	0.0
76/07/27	14:17	-0.4	69.30	24.7	6780.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/04	13:56	-0.2	71.10	13.3	120.	14.1	0.0	0.0	0.0	0.0
76/05/04	13:56	-0.2	82.20	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	82.20	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	32.40	13.0	120.	0.0	30.9	0.0	0.0	30.9
76/05/05	02:25	0.0	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	45.30	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	85.80	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	85.80	17.6	130.	11.7	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	69.30	14.3	120.	86.6	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	42.2	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	21:30	0.4	69.30	14.3	120.	43.3	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/11	21:30	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	21:30	0.4	82.20	14.3	120.	12.2	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	69.30	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	39.00	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	45.30	14.4	100.	22.1	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	32.40	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	39.00	14.4	100.	25.6	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	45.30	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	32.40	16.4	130.	154.3	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	39.00	16.4	130.	102.6	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	45.30	16.4	130.	529.8	0.0	0.0	0.0	0.0
76/05/12	08:19	0.1	69.30	16.4	130.	158.7	0.0	0.0	0.0	0.0
76/05/12	08:19	0.1	71.10	16.4	130.	717.3	14.1	0.0	0.0	14.1
76/05/12	08:19	0.1	82.20	16.4	130.	413.6	0.0	0.0	0.0	0.0
76/05/18	21:44	-0.7	42.90	15.1	120.	139.9	23.3	0.0	0.0	23.3
76/05/18	21:47	-0.7	59.70	15.1	120.	16.8	83.8	0.0	0.0	83.8
76/05/18	21:47	-0.7	76.20	15.1	120.	26.2	26.2	0.0	0.0	26.2
76/05/18	22:44	-0.7	42.90	15.1	120.	46.6	69.9	0.0	0.0	69.9
76/05/18	22:44	-0.7	59.70	15.1	120.	100.5	33.5	0.0	0.0	33.5
76/05/18	22:44	-0.7	76.20	15.1	120.	91.9	78.7	0.0	0.0	78.7
76/05/19	02:55	0.1	32.40	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	39.00	14.4	130.	0.0	25.6	0.0	0.0	25.6
76/05/19	02:55	0.1	45.30	14.4	130.	22.1	44.2	0.0	0.0	44.2
76/05/19	03:42	0.5	32.40	14.4	130.	0.0	30.9	0.0	0.0	30.9
76/05/19	03:42	0.5	39.00	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	03:42	0.5	45.30	14.4	130.	0.0	22.1	0.0	0.0	22.1
76/05/19	07:14	-0.6	42.90	16.5	130.	23.3	0.0	0.0	0.0	0.0
76/05/19	07:14	-0.6	59.70	16.5	130.	33.5	16.8	0.0	0.0	16.8
76/05/19	07:14	-0.6	76.20	16.5	130.	0.0	13.1	0.0	0.0	13.1
76/05/19	08:10	-0.8	83.70	16.5	130.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/19	08:10	-0.8	85.80	16.5	130.	11.7	0.0	0.0	0.0	0.0
76/05/19	08:10	-0.8	90.30	16.5	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	83.70	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	85.80	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	90.30	15.7	130.	44.3	11.1	0.0	0.0	11.1
76/05/19	11:30	-0.8	83.70	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:30	-0.8	85.80	15.7	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	11:30	-0.8	90.30	15.7	130.	0.0	11.1	0.0	0.0	11.1
76/05/25	13:30	-0.6	42.90	19.6	140.	23.3	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	59.70	19.6	140.	16.8	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	76.20	19.6	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	14:15	-0.7	42.90	19.6	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	14:15	-0.7	59.70	19.6	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	14:15	-0.7	76.20	19.6	140.	13.1	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	39.00	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	45.30	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	39.00	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	45.30	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/26	00:44	-0.3	32.40	16.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/26	00:44	-0.3	39.00	16.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/26	00:44	-0.2	45.30	16.8	120.	22.1	0.0	0.0	0.0	0.0
76/05/25	01:25	-0.3	32.40	16.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/26	01:25	-0.3	39.00	16.6	120.	51.3	0.0	0.0	0.0	0.0
76/05/26	01:25	-0.3	45.30	16.8	120.	22.1	0.0	0.0	0.0	0.0
76/05/26	07:07	-0.3	32.40	19.1	130.	30.9	0.0	0.0	0.0	0.0
76/05/26	07:07	-0.3	39.00	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/26	07:07	-0.3	45.30	19.1	130.	220.8	0.0	0.0	0.0	0.0
76/05/26	07:46	-0.1	32.40	19.1	130.	61.7	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
75/05/26	07:46	-0.1	39.00	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/26	07:46	-0.1	45.30	19.1	130.	110.4	0.0	0.0	0.0	0.0
76/06/01	15:07	0.0	52.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
75/06/01	15:07	0.0	44.40	17.4	150.	22.5	22.5	0.0	0.0	22.5
76/06/01	15:07	0.0	49.50	17.4	150.	20.2	0.0	0.0	0.0	0.0
76/06/01	15:45	0.0	52.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/06/01	15:45	0.0	44.40	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/06/01	15:45	0.0	49.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	11:31	-0.8	83.70	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	11:31	-0.8	85.80	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	11:31	-0.8	90.30	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	12:14	-0.9	83.70	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	12:14	-0.9	85.80	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	12:14	-0.9	90.30	20.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:00	0.0	69.30	17.9	140.	0.0	14.4	0.0	0.0	14.4
76/06/08	18:00	0.0	71.10	17.9	140.	0.0	14.1	0.0	0.0	14.1
76/06/08	18:00	0.0	82.20	17.9	140.	0.0	12.2	0.0	0.0	12.2
76/06/08	18:44	0.1	32.40	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	39.00	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	45.30	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	42.90	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	59.70	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	76.20	18.4	140.	13.1	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	42.90	18.4	140.	0.0	46.6	0.0	0.0	46.6
76/06/09	05:13	-0.5	59.70	18.4	140.	0.0	0.0	0.0	0.0	0.0
75/06/09	05:13	-0.5	76.20	18.4	140.	0.0	13.1	0.0	0.0	13.1
76/06/15	13:20	0.0	69.30	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	13:20	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	13:20	0.0	82.20	19.5	150.	0.0	0.0	12.2	0.0	12.2
76/06/15	14:00	0.0	69.30	19.5	150.	0.0	14.4	0.0	0.0	14.4

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/15	14:00	0.0	71.10	19.5	150.	0.0	14.1	0.0	0.0	14.1
76/05/15	14:00	0.0	82.20	19.5	150.	0.0	12.2	0.0	0.0	12.2
76/06/15	20:28	-1.0	83.70	20.4	160.	0.0	0.0	143.4	0.0	143.4
76/06/15	20:28	-1.0	85.80	20.4	160.	0.0	11.7	11.7	0.0	23.4
76/06/15	20:28	-1.0	90.30	20.4	160.	0.0	11.1	33.2	0.0	44.3
76/06/15	21:10	-1.0	83.70	20.4	160.	0.0	0.0	262.8	0.0	262.8
76/06/15	21:10	-1.0	85.80	20.4	160.	0.0	0.0	104.9	0.0	104.9
76/06/15	21:10	-1.0	90.30	20.4	160.	0.0	0.0	121.8	0.0	121.8
76/06/16	00:39	0.0	52.50	19.7	150.	0.0	19.0	0.0	0.0	19.0
76/06/16	00:39	0.0	44.40	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	00:39	0.0	49.50	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	52.50	19.7	150.	0.0	0.0	19.0	0.0	19.0
76/06/16	01:20	0.2	44.40	19.7	150.	0.0	0.0	0.0	0.0	0.0
76/06/16	01:20	0.2	49.50	19.7	150.	0.0	0.0	20.2	0.0	20.2
76/06/16	06:45	-0.8	42.90	20.0	170.	0.0	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	59.70	20.0	170.	0.0	0.0	0.0	0.0	0.0
76/06/16	06:45	-0.8	76.20	20.0	170.	0.0	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	83.70	20.0	170.	0.0	0.0	11.9	0.0	11.9
76/06/16	07:22	-0.8	85.80	20.0	170.	0.0	0.0	0.0	0.0	0.0
76/06/16	07:22	-0.8	90.30	20.0	170.	0.0	0.0	11.1	0.0	11.1
76/06/22	13:53	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	83.70	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	69.30	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	71.10	21.9	140.	0.0	0.0	14.1	0.0	14.1
76/06/22	19:17	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:59	0.0	69.30	21.9	140.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/22	19:59	0.0	71.10	21.9	140.	0.0	0.0	28.1	0.0	28.1
76/06/22	19:59	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/05/22	23:22	-0.4	32.40	22.8	160.	0.0	0.0	216.0	0.0	216.0
76/06/22	23:22	-0.4	39.00	22.8	160.	0.0	0.0	128.2	0.0	128.2
76/05/22	23:22	-0.4	45.30	22.8	160.	0.0	0.0	110.4	0.0	110.4
76/05/23	00:03	-0.5	42.90	22.8	160.	0.0	0.0	186.5	0.0	186.5
76/06/23	00:03	-0.5	59.70	22.8	160.	0.0	0.0	117.3	0.0	117.3
76/06/23	00:03	-0.5	76.20	22.8	160.	0.0	0.0	0.0	0.0	0.0
76/05/23	06:45	-0.3	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	39.00	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	45.30	22.2	150.	0.0	0.0	22.1	0.0	22.1
76/06/23	07:25	-0.2	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	39.00	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	45.30	22.2	150.	0.0	0.0	22.1	0.0	22.1
76/06/30	15:47	-0.2	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	71.10	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	82.20	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	71.10	23.5	990.	0.0	0.0	14.1	0.0	14.1
76/06/30	16:25	-0.3	82.20	23.5	990.	0.0	0.0	48.7	0.0	48.7
76/06/30	22:24	-0.2	69.30	24.0	-9999.	0.0	0.0	14.4	0.0	14.4
76/06/30	22:24	-0.2	71.10	24.0	-9999.	0.0	0.0	56.3	0.0	56.3
76/06/30	22:24	-0.2	82.20	24.0	-9999.	0.0	0.0	352.8	0.0	352.8
76/05/30	23:06	0.0	69.30	24.0	-9999.	0.0	14.4	28.9	0.0	43.3
76/06/30	23:06	0.0	71.10	24.0	-9999.	0.0	0.0	84.4	0.0	84.4
76/05/30	23:06	0.0	82.20	24.0	-9999.	0.0	0.0	73.0	0.0	73.0
76/07/13	14:24	-0.1	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	44.40	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	49.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	15:08	-0.2	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/08/31	13:19	-0.2	71.10	25.0	2590.	0.0	0.0	0.0	0.0	0.0
76/08/31	13:19	-0.2	82.20	25.0	2590.	0.0	0.0	0.0	0.0	0.0
76/08/31	19:59	-0.5	83.70	24.7	5370.	0.0	0.0	0.0	0.0	0.0
76/08/31	19:59	-0.5	85.80	24.7	5370.	0.0	0.0	0.0	11.7	11.7
76/08/31	19:59	-0.5	90.30	24.7	5370.	0.0	0.0	0.0	0.0	0.0
76/09/01	00:42	-0.7	83.70	24.2	3620.	0.0	0.0	0.0	0.0	0.0
76/09/01	00:42	-0.7	85.80	24.2	3620.	0.0	0.0	0.0	0.0	0.0
76/09/01	00:42	-0.7	90.30	24.2	3620.	0.0	0.0	0.0	0.0	0.0
76/09/01	07:58	-0.6	83.70	24.0	4620.	0.0	0.0	0.0	0.0	0.0
76/09/01	07:58	-0.6	85.80	24.0	4620.	0.0	0.0	0.0	0.0	0.0
76/09/01	07:58	-0.6	90.30	24.0	4620.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/02/05	19:25	-0.9	131.92	13.0	140.	7.6	0.0	0.0	0.0	0.0
76/02/05	20:03	-1.0	138.05	12.8	140.	7.2	0.0	0.0	0.0	0.0
76/02/05	01:38	-0.1	16.94	6.8	120.	0.0	0.0	0.0	0.0	0.0
76/02/06	02:12	-0.1	10.54	6.7	120.	0.0	0.0	0.0	0.0	0.0
76/02/06	08:07	-9.8	123.21	10.9	140.	0.0	0.0	0.0	0.0	0.0
76/02/06	08:45	-0.9	129.22	11.3	135.	7.7	7.7	0.0	0.0	7.7
76/02/06	12:32	-8.3	90.96	8.8	110.	0.0	0.0	0.0	0.0	0.0
76/02/06	13:11	-0.1	81.73	9.2	110.	0.0	0.0	0.0	0.0	0.0
76/02/10	14:27	-0.7	104.55	7.7	135.	0.0	0.0	0.0	0.0	0.0
76/02/10	15:03	-0.6	99.21	7.7	135.	0.0	0.0	0.0	0.0	0.0
76/02/10	18:53	-0.2	83.66	10.5	180.	0.0	0.0	0.0	0.0	0.0
76/02/10	19:28	-0.2	85.68	10.5	180.	0.0	0.0	0.0	0.0	0.0
76/02/11	00:29	-0.8	30.11	9.4	150.	0.0	0.0	0.0	0.0	0.0
76/02/11	01:05	-0.9	25.71	9.4	150.	0.0	0.0	0.0	0.0	0.0
76/02/11	08:44	-0.2	83.41	10.0	490.	0.0	24.0	0.0	0.0	24.0
76/02/11	09:22	-0.3	83.10	10.0	490.	0.0	24.1	0.0	0.0	24.1
76/02/17	13:38	0.1	14.40	1.4	130.	0.0	0.0	0.0	0.0	0.0
76/02/17	14:09	-0.1	16.00	1.4	130.	0.0	0.0	0.0	0.0	0.0
76/02/17	14:38	-0.2	14.40	1.4	130.	0.0	69.4	0.0	0.0	69.4
76/02/17	17:52	-0.7	14.40	4.1	120.	0.0	69.4	0.0	0.0	69.4
76/02/17	18:18	-0.8	14.40	4.1	120.	0.0	0.0	0.0	0.0	0.0
76/02/17	18:44	-0.9	14.40	4.1	120.	0.0	69.4	0.0	0.0	69.4
76/02/18	01:44	0.1	15.00	1.9	110.	0.0	0.0	0.0	0.0	0.0
76/02/18	01:16	0.3	15.00	1.9	110.	0.0	0.0	0.0	0.0	0.0
76/02/18	08:50	0.3	14.40	1.9	110.	0.0	0.0	0.0	0.0	0.0
76/02/18	08:43	-0.3	16.00	1.6	100.	0.0	0.0	0.0	0.0	0.0
76/02/18	08:16	-0.5	14.40	1.6	100.	0.0	0.0	0.0	0.0	0.0
76/02/18	07:52	-0.6	14.40	1.6	100.	0.0	0.0	0.0	0.0	0.0
76/02/24	12:25	-0.8	14.40	3.7	110.	0.0	0.0	0.0	0.0	0.0
76/02/24	12:50	-0.8	14.40	3.7	110.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/02/24	13:17	-0.8	14.40	3.7	110.	0.0	0.0	0.0	0.0	0.0
76/02/24	19:55	-0.3	14.40	1.4	100.	0.0	0.0	138.9	0.0	138.9
76/02/24	19:26	-0.2	14.40	1.4	100.	0.0	0.0	0.0	0.0	0.0
76/02/24	18:52	-0.2	16.00	1.4	100.	0.0	0.0	0.0	0.0	0.0
76/02/24	23:01	-0.8	16.00	3.4	110.	0.0	0.0	0.0	0.0	0.0
76/02/24	23:27	-0.9	14.40	3.4	110.	0.0	0.0	0.0	0.0	0.0
76/02/24	23:55	-0.9	16.00	3.4	110.	0.0	0.0	0.0	0.0	0.0
76/02/25	07:28	-0.1	14.40	3.5	110.	0.0	0.0	0.0	0.0	0.0
76/02/25	06:57	-0.1	14.80	3.5	110.	0.0	0.0	0.0	0.0	0.0
76/02/25	06:30	-0.1	14.40	3.5	110.	0.0	0.0	0.0	0.0	0.0
76/03/02	11:20	0.3	45.00	3.9	110.	0.0	111.1	0.0	0.0	111.1
76/03/02	17:09	-0.6	43.00	6.5	120.	0.0	46.5	46.5	0.0	93.0
76/03/03	00:16	0.3	45.00	5.2	110.	0.0	22.2	66.7	0.0	88.9
76/03/03	06:15	-0.7	46.00	4.0	110.	0.0	65.2	173.9	0.0	239.1
76/03/09	12:35	-0.6	83.70	4.5	90.	0.0	131.4	0.0	0.0	131.4
76/03/09	12:35	-0.6	85.80	4.5	90.	46.6	186.5	0.0	0.0	186.5
76/03/09	12:35	-0.6	90.30	4.5	90.	22.1	254.7	0.0	0.0	254.7
76/03/09	13:28	-0.4	69.30	4.5	90.	0.0	101.0	0.0	0.0	101.0
76/03/09	13:28	-0.4	71.10	4.5	90.	0.0	211.0	0.0	0.0	211.0
76/03/09	13:28	-0.4	82.20	4.5	90.	0.0	292.0	0.0	0.0	292.0
76/03/09	17:28	0.0	69.30	4.4	110.	0.0	101.0	0.0	0.0	101.0
76/03/09	17:28	0.0	71.10	4.4	110.	0.0	239.1	0.0	0.0	239.1
76/03/09	17:28	0.0	82.20	4.4	110.	0.0	206.8	0.0	0.0	206.8
76/03/09	18:11	-0.1	69.30	4.4	110.	0.0	230.9	14.4	0.0	245.3
76/03/09	18:11	-0.1	71.10	4.4	110.	0.0	295.4	0.0	0.0	295.4
76/03/09	18:11	-0.1	82.20	4.4	110.	0.0	60.8	0.0	0.0	60.8
76/03/09	23:17	-0.4	69.30	5.0	110.	0.0	101.0	0.0	0.0	101.0
76/03/09	23:17	-0.4	71.10	5.0	110.	0.0	196.9	0.0	0.0	196.9
76/03/09	23:17	-0.4	82.20	5.0	110.	0.0	121.7	0.0	0.0	121.7
76/03/10	00:04	-0.3	32.40	5.0	110.	0.0	246.9	0.0	0.0	246.9

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/10	00:04	-0.3	39.00	5.0	110.	0.0	359.0	0.0	0.0	359.0
76/03/10	00:04	-0.3	45.30	5.0	110.	0.0	485.7	0.0	0.0	485.7
76/03/10	04:57	0.4	32.40	4.3	115.	0.0	0.0	0.0	0.0	0.0
76/03/10	04:57	0.4	39.00	4.3	115.	0.0	102.6	0.0	0.0	102.6
76/03/10	04:57	0.4	45.30	4.3	115.	0.0	375.3	0.0	0.0	375.3
76/03/10	05:42	0.4	32.40	4.3	115.	0.0	0.0	0.0	0.0	0.0
76/03/10	05:42	0.4	39.00	4.3	115.	0.0	102.6	0.0	0.0	102.6
76/03/10	05:42	0.4	45.30	4.3	115.	0.0	397.4	0.0	0.0	397.4
76/03/16	13:45	-0.2	69.30	6.7	570.	0.0	115.4	288.6	0.0	404.0
76/03/16	13:45	-0.2	71.10	6.7	570.	0.0	253.2	576.7	0.0	829.9
76/03/16	13:45	-0.2	82.20	6.7	570.	0.0	863.7	608.3	0.0	1472.0
76/03/16	14:42	-0.5	83.70	6.7	570.	0.0	179.2	131.4	0.0	310.6
76/03/16	14:42	-0.5	85.80	6.7	570.	0.0	93.2	268.1	0.0	361.3
76/03/16	14:42	-0.5	90.30	6.7	570.	0.0	188.3	310.1	0.0	498.4
76/03/16	18:03	-0.6	83.70	6.2	470.	0.0	191.2	95.6	0.0	286.8
76/03/16	18:03	-0.6	85.80	6.2	470.	0.0	186.5	104.9	0.0	291.4
76/03/16	18:03	-0.6	90.30	6.2	470.	0.0	354.4	254.7	0.0	609.1
76/03/16	18:50	-0.3	69.30	6.2	470.	0.0	591.6	101.0	0.0	692.6
76/03/16	18:50	-0.3	71.10	6.2	470.	0.0	843.9	126.6	0.0	970.5
76/03/16	18:50	-0.3	82.20	6.2	470.	0.0	656.9	48.7	0.0	705.6
76/03/16	23:31	0.6	69.30	2.6	475.	0.0	158.7	389.6	0.0	548.3
76/03/16	23:31	0.6	71.10	2.6	475.	0.0	351.6	365.7	0.0	717.3
76/03/16	23:31	0.6	82.20	2.6	475.	0.0	352.8	498.8	0.0	851.6
76/03/17	00:15	0.4	69.30	2.6	475.	0.0	0.0	43.3	0.0	43.3
76/03/17	00:15	0.4	71.10	2.6	475.	0.0	28.1	70.3	0.0	98.4
76/03/17	00:15	0.4	82.20	2.6	475.	0.0	36.5	133.8	0.0	170.3
76/03/17	08:26	-0.5	83.70	1.9	150.	0.0	298.7	35.8	0.0	334.5
76/03/17	08:26	-0.5	85.80	1.9	150.	0.0	303.0	0.0	0.0	303.0
76/03/17	08:26	-0.5	90.30	1.9	150.	0.0	132.9	199.3	0.0	332.2
76/03/17	09:17	-0.3	32.40	1.9	150.	0.0	277.8	30.9	0.0	308.7

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/17	09:17	-0.3	71.10	1.9	150.	0.0	98.5	0.0	0.0	98.5
76/03/17	09:17	-0.3	82.20	1.9	150.	0.0	109.5	24.3	0.0	133.8
76/03/23	12:30	-0.9	83.70	5.1	120.	0.0	0.0	0.0	0.0	0.0
76/03/23	12:30	-0.9	85.80	5.1	120.	0.0	128.2	0.0	0.0	128.2
76/03/23	12:30	-0.9	90.30	5.1	120.	0.0	155.0	55.4	0.0	210.4
76/03/23	13:15	-0.8	83.70	5.1	120.	0.0	83.6	0.0	0.0	83.6
76/03/23	13:15	-0.8	85.80	5.1	120.	0.0	23.3	0.0	0.0	23.3
76/03/23	13:15	-0.8	90.30	5.1	120.	0.0	0.0	0.0	0.0	0.0
76/03/23	17:20	-0.2	69.30	4.9	120.	0.0	14.4	0.0	0.0	14.4
76/03/23	17:20	-0.2	71.10	4.9	120.	0.0	70.3	0.0	0.0	70.3
76/03/23	17:20	-0.3	82.20	4.9	120.	0.0	60.8	0.0	0.0	60.8
76/03/23	17:59	-0.3	69.30	4.9	120.	0.0	0.0	0.0	0.0	0.0
76/03/23	17:59	-0.3	71.10	4.9	120.	0.0	28.1	0.0	0.0	28.1
76/03/23	17:59	-0.3	82.20	4.9	120.	0.0	24.3	0.0	0.0	24.3
76/03/24	00:43	-0.9	42.90	5.1	120.	0.0	23.3	0.0	0.0	23.3
76/03/24	00:43	-0.9	59.70	5.1	120.	0.0	50.3	0.0	0.0	50.3
76/03/24	00:43	-0.9	76.20	5.1	120.	0.0	65.6	0.0	0.0	65.6
76/03/24	01:22	-0.8	42.90	5.1	120.	0.0	139.9	0.0	0.0	139.9
76/03/24	01:22	-0.8	59.70	5.1	120.	0.0	134.0	0.0	0.0	134.0
76/03/24	01:22	-0.8	76.20	5.1	120.	0.0	26.2	0.0	0.0	26.2
76/03/24	07:13	-0.3	69.30	5.0	120.	0.0	28.9	0.0	0.0	28.9
76/03/24	07:13	-0.3	71.10	5.0	120.	0.0	56.3	0.0	0.0	56.3
76/03/24	07:13	-0.3	82.20	5.0	120.	0.0	60.8	0.0	0.0	60.8
76/03/24	07:53	-0.4	69.30	5.0	120.	0.0	14.4	0.0	0.0	14.4
76/03/24	07:53	-0.4	71.10	5.0	120.	0.0	14.1	0.0	0.0	14.1
76/03/24	07:53	-0.4	82.20	5.0	120.	0.0	73.0	0.0	0.0	73.0
76/03/30	11:39	0.1	69.30	6.7	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	11:39	0.1	71.10	6.7	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	11:39	0.1	82.20	6.7	130.	0.0	12.2	0.0	0.0	12.2
76/03/30	12:31	0.0	69.30	6.7	130.	0.0	14.4	0.0	0.0	14.4

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/03/29	12:31	0.0	71.10	6.7	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	12:31	0.0	82.20	6.7	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	19:47	-0.1	69.30	6.5	130.	0.0	14.4	0.0	0.0	14.4
76/03/30	19:47	-0.1	71.10	6.5	130.	0.0	14.1	0.0	0.0	14.1
76/03/30	19:47	-0.1	82.20	6.5	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	20:36	0.3	69.30	6.5	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	20:36	0.3	71.10	6.5	130.	0.0	0.0	0.0	0.0	0.0
76/03/30	20:36	0.3	82.20	6.5	130.	0.0	0.0	0.0	0.0	0.0
76/03/31	00:24	0.2	32.40	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	00:24	0.2	39.00	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	00:24	0.2	45.30	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	01:02	0.0	6.93	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	01:02	0.0	39.00	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	01:02	0.0	45.30	6.3	120.	0.0	0.0	0.0	0.0	0.0
76/03/31	05:43	0.7	32.40	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/03/31	05:43	0.7	39.00	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/03/31	05:43	0.7	45.30	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/03/31	06:21	-0.7	42.90	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/03/31	06:21	-0.7	59.70	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/03/31	06:21	-0.7	76.20	8.7	140.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:07	-0.2	69.30	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:07	-0.2	71.10	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:07	-0.2	82.20	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:50	-0.2	69.30	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:50	-0.2	71.10	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	16:50	-0.2	82.20	7.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/06	22:55	-0.5	42.90	7.8	100.	0.0	0.0	0.0	0.0	0.0
76/04/06	22:55	-0.5	59.70	7.8	100.	0.0	0.0	0.0	0.0	0.0
76/04/06	22:55	-0.5	76.20	7.8	100.	0.0	0.0	0.0	0.0	0.0
76/04/06	23:42	-0.4	32.40	7.8	100.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/06	23:42	-0.4	39.00	7.8	100.	0.0	0.0	0.0	0.0	0.0
76/04/06	23:42	-0.4	45.30	7.8	100.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:11	-0.6	42.90	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:11	-0.6	59.70	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:11	-0.6	76.20	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:48	-0.7	42.90	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:48	-0.7	59.70	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	07:48	-0.7	76.20	10.7	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	12:35	-0.5	42.90	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	12:35	-0.5	59.70	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	12:35	-0.5	76.20	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	13:15	-0.5	42.90	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	13:15	-0.5	59.70	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/07	13:15	-0.5	76.20	8.2	110.	0.0	0.0	0.0	0.0	0.0
76/04/13	12:42	-0.8	83.70	8.2	1070.	0.0	0.0	35.8	0.0	35.8
76/04/13	12:42	-0.8	85.80	8.2	1070.	0.0	0.0	104.9	11.7	116.6
76/04/13	12:42	-0.8	90.30	8.2	1070.	0.0	0.0	99.7	22.1	121.8
76/04/13	13:55	-0.1	69.30	8.2	1070.	0.0	0.0	245.3	57.7	303.0
76/04/13	13:55	-0.1	71.10	8.2	1070.	0.0	0.0	323.5	42.2	365.7
76/04/13	13:55	-0.1	82.20	8.2	1070.	0.0	0.0	304.1	73.0	377.1
76/04/13	17:30	-0.9	83.70	7.9	220.	0.0	0.0	23.9	0.0	23.9
76/04/13	17:30	-0.9	85.80	7.9	220.	0.0	0.0	23.3	0.0	23.3
76/04/13	17:30	-0.9	90.30	7.9	220.	0.0	0.0	132.9	22.1	155.0
76/04/13	18:07	-0.6	83.70	7.9	220.	0.0	0.0	23.9	0.0	23.9
76/04/13	18:07	-0.6	85.80	7.9	220.	0.0	0.0	23.3	46.6	69.9
76/04/13	18:07	-0.6	90.30	7.9	220.	0.0	0.0	33.2	22.1	55.3
76/04/14	00:40	-0.6	42.90	7.4	910.	0.0	0.0	23.3	0.0	23.3
76/04/14	00:40	-0.6	59.70	7.4	910.	0.0	0.0	33.5	0.0	33.5
76/04/14	00:40	-0.6	76.20	7.4	910.	0.0	0.0	0.0	0.0	0.0
76/04/14	01:20	-0.7	42.90	7.4	910.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/14	01:20	-0.7	59.70	7.4	910.	0.0	0.0	0.0	0.0	0.0
76/04/14	01:20	-0.7	76.20	7.4	910.	0.0	0.0	13.1	0.0	13.1
76/04/14	04:55	-0.9	42.90	7.4	440.	0.0	0.0	0.0	23.3	23.3
76/04/14	04:55	-0.9	59.70	7.4	440.	0.0	0.0	0.0	0.0	0.0
76/04/14	04:55	-0.9	76.20	7.4	440.	0.0	0.0	0.0	0.0	0.0
76/04/14	05:40	-1.0	42.90	7.4	440.	0.0	0.0	0.0	0.0	0.0
76/04/14	05:40	-1.0	59.70	7.4	440.	0.0	0.0	0.0	0.0	0.0
76/04/14	05:40	-1.0	76.20	7.4	440.	0.0	0.0	0.0	0.0	0.0
76/04/20	14:25	-0.1	69.30	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	14:25	-0.1	71.10	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	14:25	-0.1	82.20	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	15:10	-0.1	69.30	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	15:10	-0.1	71.10	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	15:10	-0.1	82.20	10.3	100.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:10	-0.8	83.70	12.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:10	-0.8	85.80	12.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:10	-0.8	90.30	12.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:50	-0.9	83.70	12.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:50	-0.9	85.80	12.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/20	20:50	-0.9	90.30	12.8	90.	0.0	0.0	0.0	22.1	22.1
76/04/21	01:20	-0.3	32.40	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	01:20	-0.3	39.00	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	01:20	-0.3	45.30	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	02:00	-0.2	32.40	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	02:00	-0.2	39.00	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	02:00	-0.2	45.30	9.8	90.	0.0	0.0	0.0	0.0	0.0
76/04/21	06:31	-0.4	32.40	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/21	06:31	-0.4	39.00	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/21	06:31	-0.4	45.30	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/21	07:10	-0.5	83.70	11.0	95.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/21	07:10	-0.5	85.80	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/21	07:10	-0.5	90.30	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	83.70	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	85.80	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	90.30	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	13:22	-0.7	83.70	11.4	270.	0.0	0.0	11.9	0.0	11.9
76/04/27	13:22	-0.7	85.80	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	13:22	-0.7	90.30	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	18:35	-0.9	83.70	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	18:35	-0.9	85.80	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	18:35	-0.9	90.30	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	83.70	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	85.80	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	90.30	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	32.40	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	39.00	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	45.30	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	32.40	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	39.00	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	45.30	10.5	160.	0.0	0.0	0.0	22.1	22.1
76/04/28	07:38	-0.7	42.90	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	07:38	-0.7	59.70	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	07:38	-0.7	76.20	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	42.90	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	59.70	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	76.20	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	69.30	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	71.10	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	82.20	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:56	-0.2	69.30	13.3	120.	0.0	0.0	0.0	0.0	0.0

ATLANTIC TOMCOD

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/04	13:56	-0.2	71.10	13.3	120.	0.0	0.0	0.0	14.1	14.1
76/05/04	13:56	-0.2	82.20	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.0	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	82.20	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	45.30	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	85.80	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	83.70	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	85.80	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	90.30	17.6	130.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	69.30	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/11	21:30	0.4	69.30	14.3	120.	0.0	0.0	0.0	0.0	0.0

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/04/21	07:10	-0.5	85.80	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/21	07:10	-0.5	90.30	11.0	95.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	83.70	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	85.80	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	12:41	-0.6	90.30	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	13:22	-0.7	83.70	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	13:22	-0.7	85.80	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	13:22	-0.7	90.30	11.4	270.	0.0	0.0	0.0	0.0	0.0
76/04/27	18:35	-0.9	83.70	11.3	130.	0.0	0.0	11.9	0.0	11.9
76/04/27	18:35	-0.9	85.80	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	18:35	-0.9	90.30	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	83.70	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	85.80	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	19:15	-0.7	90.30	11.3	130.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	32.40	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	39.00	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/27	23:25	0.2	45.30	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	32.40	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	39.00	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	00:05	-0.3	45.30	10.5	160.	0.0	0.0	0.0	0.0	0.0
76/04/28	07:38	-0.7	42.90	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	07:38	-0.7	59.70	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	07:38	-0.7	76.20	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	42.90	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	59.70	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/04/28	08:16	-0.5	76.20	12.0	140.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	69.30	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	71.10	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:07	-0.3	82.20	13.3	120.	0.0	0.0	24.3	0.0	24.3
76/05/04	13:56	-0.2	69.30	13.3	120.	0.0	0.0	14.4	0.0	14.4

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/04	13:56	-0.2	71.10	13.3	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	13:56	-0.2	82.20	13.3	120.	0.0	0.0	219.0	0.0	219.0
76/05/04	21:02	-1.0	42.90	13.8	120.	0.0	0.0	186.5	0.0	186.5
76/05/04	21:02	-1.0	59.70	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:02	-1.9	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	42.90	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/04	21:45	-0.9	59.70	13.8	120.	0.0	0.0	16.8	0.0	16.8
76/05/04	21:45	-0.9	76.20	13.8	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	01:48	-0.1	82.20	13.0	120.	0.0	0.0	12.2	0.0	12.2
76/05/05	02:25	0.0	32.40	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	39.00	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	02:25	0.0	45.30	13.0	120.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	06:56	-0.7	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	42.90	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	59.70	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/05	07:44	-0.8	76.20	12.8	110.	0.0	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	63.70	17.6	130.	23.9	11.9	23.9	0.0	35.8
76/05/11	13:14	-0.8	85.80	17.6	130.	46.6	0.0	0.0	0.0	0.0
76/05/11	13:14	-0.8	90.30	17.6	130.	44.3	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	83.70	17.6	130.	23.9	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	85.80	17.6	130.	128.2	0.0	0.0	0.0	0.0
76/05/11	14:19	-0.9	90.30	17.6	130.	55.4	0.0	0.0	0.0	0.0
76/05/11	20:45	0.4	69.30	14.3	120.	0.0	0.0	86.6	0.0	86.6
76/05/11	20:45	0.4	71.10	14.3	120.	0.0	0.0	56.3	0.0	56.3
76/05/11	20:45	0.4	71.10	14.3	120.	14.1	0.0	28.1	0.0	28.1
76/05/11	21:30	0.4	69.30	14.3	120.	0.0	0.0	57.7	0.0	57.7

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO. /1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/11	21:30	0.4	71.10	14.3	120.	0.0	0.0	14.1	0.0	14.1
76/05/11	21:30	0.4	82.20	14.3	120.	0.0	0.0	12.2	0.0	12.2
76/05/12	00:45	-0.3	69.30	14.4	100.	14.4	14.4	86.6	0.0	101.0
76/05/12	00:45	-0.3	39.00	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	00:45	-0.3	45.30	14.4	100.	0.0	0.0	22.1	0.0	22.1
76/05/12	01:25	-0.4	32.40	14.4	100.	61.7	92.6	0.0	0.0	92.6
76/05/12	01:25	-0.4	39.00	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	01:25	-0.4	45.30	14.4	100.	0.0	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	32.40	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	39.00	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	07:35	-0.1	45.30	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	08:19	0.1	69.30	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/12	08:19	0.1	71.10	16.4	130.	0.0	0.0	42.2	0.0	42.2
76/05/12	08:19	0.1	82.20	16.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/18	21:44	-0.7	42.90	15.1	120.	0.0	0.0	46.6	0.0	46.6
76/05/18	21:47	-0.7	59.70	15.1	120.	0.0	0.0	33.5	0.0	33.5
76/05/18	21:47	-0.7	76.20	15.1	120.	0.0	13.1	13.1	0.0	26.2
76/05/18	22:44	-0.7	42.90	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/18	22:44	-0.7	59.70	15.1	120.	0.0	67.0	0.0	0.0	67.0
76/05/18	22:44	-0.7	76.20	15.1	120.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	32.40	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	39.00	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	02:55	0.1	45.30	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	03:42	0.5	32.40	14.4	130.	0.0	61.7	0.0	0.0	61.7
76/05/19	03:42	0.5	39.00	14.4	130.	0.0	102.6	0.0	0.0	102.6
76/05/19	03:42	0.5	45.30	14.4	130.	0.0	0.0	0.0	0.0	0.0
76/05/19	07:14	-0.6	42.90	16.5	130.	0.0	46.6	23.3	0.0	69.9
76/05/19	07:14	-0.6	59.70	16.5	130.	16.8	16.8	0.0	0.0	16.8
76/05/19	07:14	-0.6	76.20	16.5	130.	0.0	0.0	13.1	0.0	13.1
76/05/19	08:10	-0.8	83.70	16.5	130.	11.9	0.0	59.7	0.0	59.7

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/19	08:10	-0.8	85.80	16.5	130.	0.0	0.0	11.7	0.0	11.7
76/05/19	08:10	-0.8	90.30	16.5	130.	59.7	0.0	0.0	0.0	0.0
76/05/19	10:36	-0.9	83.70	15.7	130.	0.0	0.0	107.5	0.0	107.5
76/05/19	10:36	-0.9	85.80	15.7	130.	11.7	0.0	104.9	0.0	104.9
76/05/19	10:36	-0.9	90.30	15.7	130.	11.1	0.0	66.4	0.0	66.4
76/05/19	11:30	-0.8	83.70	15.7	130.	11.9	0.0	59.7	0.0	59.7
76/05/19	11:30	-0.8	85.80	15.7	130.	0.0	0.0	244.8	0.0	244.8
76/05/19	11:30	-0.8	90.30	15.7	130.	0.0	0.0	68.6	0.0	68.6
76/05/25	13:30	-0.6	42.90	19.6	140.	23.3	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	59.70	19.6	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	13:30	-0.6	76.20	19.6	140.	0.0	0.0	26.2	0.0	26.2
76/05/25	14:15	-0.7	42.90	19.6	140.	0.0	0.0	116.6	0.0	116.6
76/05/25	14:15	-0.7	59.70	19.6	140.	16.8	0.0	67.0	0.0	67.0
76/05/25	14:15	-0.7	76.20	19.6	140.	0.0	0.0	118.1	0.0	118.1
76/05/25	21:30	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	21:30	0.3	39.00	21.1	140.	0.0	51.3	461.5	0.0	512.8
76/05/25	21:30	0.3	45.30	21.1	140.	0.0	22.1	485.7	0.0	507.8
76/05/25	22:12	0.3	32.40	21.1	140.	0.0	0.0	0.0	0.0	0.0
76/05/25	22:12	0.3	39.00	21.1	140.	0.0	51.3	0.0	0.0	51.3
76/05/25	22:12	0.3	45.30	21.1	140.	0.0	44.2	507.7	0.0	551.9
76/05/26	00:44	-0.3	32.40	16.8	120.	0.0	0.0	92.6	0.0	92.6
76/05/26	00:44	-0.3	39.00	16.8	120.	0.0	0.0	538.5	0.0	538.5
76/05/26	00:44	-0.3	45.30	16.8	120.	0.0	44.2	838.9	0.0	883.1
76/05/26	01:25	-0.3	32.40	16.8	120.	0.0	0.0	648.1	0.0	648.1
76/05/26	01:25	-0.3	39.00	16.8	120.	0.0	0.0	1974.4	0.0	1974.4
76/05/26	01:25	-0.3	45.30	16.8	120.	0.0	0.0	1810.2	0.0	1810.2
76/05/26	07:07	-0.3	32.40	19.1	130.	0.0	0.0	277.8	0.0	277.8
76/05/26	07:07	-0.3	39.00	19.1	130.	0.0	25.6	0.0	0.0	25.6
76/05/26	07:07	-0.3	45.30	19.1	130.	0.0	0.0	44.2	0.0	44.2
76/05/26	07:46	-0.1	32.40	19.1	130.	0.0	0.0	277.8	0.0	277.8

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/05/26	07:46	-0.1	39.00	19.1	130.	0.0	0.0	0.0	0.0	0.0
76/05/26	07:46	-0.1	45.30	19.1	130.	0.0	22.1	0.0	0.0	22.1
76/05/01	15:07	0.0	52.50	17.4	150.	0.0	0.0	438.1	0.0	438.1
76/05/01	15:07	0.0	44.40	17.4	150.	0.0	0.0	112.6	0.0	112.6
76/05/01	15:07	0.0	49.50	17.4	150.	0.0	0.0	0.0	0.0	0.0
76/05/01	15:45	0.0	52.50	17.4	150.	0.0	0.0	1885.7	0.0	1885.7
76/05/01	15:45	0.0	44.40	17.4	150.	0.0	0.0	855.9	0.0	855.9
76/05/01	15:45	0.0	49.50	17.4	150.	0.0	0.0	141.4	0.0	141.4
76/06/08	11:31	-0.8	83.70	20.7	150.	71.7	0.0	35.8	0.0	35.8
76/06/08	11:31	-0.8	85.80	20.7	150.	81.6	11.7	104.9	0.0	116.6
76/06/08	11:31	-0.8	90.30	20.7	150.	0.0	0.0	487.3	0.0	487.3
76/05/08	12:14	-0.9	83.70	20.7	150.	0.0	11.9	83.6	0.0	95.5
76/06/08	12:14	-0.9	85.80	20.7	150.	58.3	0.0	128.2	0.0	128.2
76/06/08	12:14	-0.9	90.30	20.7	150.	11.1	0.0	254.7	0.0	254.7
76/06/08	18:00	0.0	69.30	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:00	0.0	71.10	17.9	140.	0.0	0.0	98.5	0.0	98.5
76/06/08	18:00	0.0	82.20	17.9	140.	0.0	0.0	12.2	0.0	12.2
76/06/08	18:44	0.1	32.40	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	39.00	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/08	18:44	0.1	45.30	17.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	42.90	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	04:30	-0.8	59.76	18.4	140.	0.0	16.8	67.0	0.0	83.8
76/06/09	04:30	-0.8	76.20	18.4	140.	0.0	0.0	13.1	0.0	13.1
76/06/09	05:13	-0.5	42.90	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	59.70	18.4	140.	0.0	0.0	0.0	0.0	0.0
76/06/09	05:13	-0.5	76.20	18.4	140.	0.0	0.0	26.2	0.0	26.2
76/04/15	13:20	0.0	69.30	19.5	150.	0.0	0.0	14.4	0.0	14.4
76/05/15	13:20	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/05/15	13:20	0.0	82.20	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	14:00	0.0	69.39	19.5	150.	0.0	0.0	14.4	0.0	14.4

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/15	14:00	0.0	71.10	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	14:00	0.0	82.20	19.5	150.	0.0	0.0	0.0	0.0	0.0
76/06/15	20:23	-1.0	83.70	20.4	160.	0.0	0.0	119.5	0.0	119.5
76/06/15	20:23	-1.0	85.80	20.4	160.	0.0	0.0	128.2	0.0	128.2
76/06/15	20:28	-1.0	90.30	20.4	160.	11.1	11.1	121.8	0.0	132.9
76/06/15	21:10	-1.0	83.70	20.4	160.	0.0	0.0	71.7	0.0	71.7
76/06/15	21:10	-1.0	85.80	20.4	160.	0.0	0.0	81.6	0.0	81.6
76/06/15	21:10	-1.0	90.30	20.4	160.	0.0	0.0	88.6	0.0	88.6
76/06/16	00:39	0.0	52.50	19.7	150.	0.0	0.0	133.3	0.0	133.3
76/06/16	00:39	0.0	44.40	19.7	150.	0.0	0.0	45.0	0.0	45.0
76/06/16	00:39	0.0	49.50	19.7	150.	0.0	0.0	20.2	0.0	20.2
76/06/16	01:20	0.2	52.50	19.7	150.	0.0	0.0	76.2	0.0	76.2
76/06/16	01:20	0.2	44.40	19.7	150.	0.0	0.0	45.0	0.0	45.0
76/06/16	01:20	0.2	49.50	19.7	150.	0.0	0.0	40.4	0.0	40.4
76/06/16	06:45	-0.8	42.90	20.0	170.	23.3	0.0	93.2	0.0	93.2
76/06/16	06:45	-0.8	59.70	20.0	170.	33.5	0.0	16.8	0.0	16.8
76/06/16	06:45	-0.8	76.20	20.0	170.	13.1	0.0	13.1	0.0	13.1
76/06/16	07:22	-0.8	83.70	20.0	170.	23.9	0.0	119.5	0.0	119.5
76/06/16	07:22	-0.8	85.80	20.0	170.	23.3	0.0	58.3	0.0	58.3
76/06/16	07:22	-0.8	90.30	20.0	170.	33.2	0.0	121.8	0.0	121.8
76/06/22	13:53	-1.0	83.70	24.5	-9999.	0.0	0.0	11.9	0.0	11.9
76/06/22	13:53	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	13:53	-1.0	90.30	24.5	-9999.	0.0	0.0	11.1	0.0	11.1
76/06/22	14:43	-1.0	83.70	24.5	-9999.	0.0	0.0	35.8	0.0	35.8
76/06/22	14:43	-1.0	85.80	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	14:43	-1.0	90.30	24.5	-9999.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	69.30	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:17	0.0	71.10	21.9	140.	0.0	0.0	14.1	0.0	14.1
76/06/22	19:17	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	19:59	0.0	69.30	21.9	140.	0.0	0.0	14.4	0.0	14.4

CLUPEIDS

DATE	TIME (HR:MIN)	TIDE (M)	SAMPLE VOLUME (CU M)	TEMPERATURE (DEGREES C)	CONDUCTIVITY (MICROMHOS)	DENSITY(NO./1000 CU M)				
						EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
76/06/22	19:59	0.0	71.10	21.9	140.	0.0	0.0	14.1	0.0	14.1
76/06/22	19:59	0.0	82.20	21.9	140.	0.0	0.0	0.0	0.0	0.0
76/06/22	23:22	-0.4	32.40	22.8	160.	0.0	0.0	0.0	0.0	0.0
76/06/22	23:22	-0.4	39.00	22.8	160.	0.0	0.0	0.0	0.0	0.0
76/06/22	23:22	-0.4	45.30	22.8	160.	0.0	0.0	0.0	0.0	0.0
76/06/23	00:03	-0.5	42.90	22.8	160.	23.3	0.0	23.3	0.0	23.3
76/06/23	00:03	-0.5	59.70	22.8	160.	83.8	0.0	0.0	0.0	0.0
76/06/23	00:03	-0.5	76.20	22.8	160.	39.4	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	39.00	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	06:45	-0.3	45.30	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	32.40	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	39.00	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/23	07:25	-0.2	45.30	22.2	150.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	71.10	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	15:47	-0.2	82.20	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	69.30	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	71.10	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/06/30	16:25	-0.3	82.20	23.5	990.	0.0	0.0	0.0	0.0	0.0
76/07/30	22:24	-0.2	69.30	24.0	-9999.	0.0	0.0	28.9	0.0	28.9
76/07/30	22:24	-0.2	71.10	24.0	-9999.	0.0	0.0	0.0	0.0	0.0
76/07/30	22:24	-0.2	82.20	24.0	-9999.	0.0	0.0	60.8	0.0	60.8
76/07/31	23:06	0.0	69.30	24.0	-9999.	0.0	0.0	57.7	0.0	57.7
76/07/31	23:06	0.0	71.10	24.0	-9999.	0.0	0.0	56.3	0.0	56.3
76/07/31	23:06	0.0	82.20	24.0	-9999.	0.0	0.0	24.3	0.0	24.3
76/07/13	14:24	-0.1	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	44.40	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	14:24	-0.1	49.50	27.0	220.	0.0	0.0	0.0	0.0	0.0
76/07/13	15:08	-0.2	52.50	27.0	220.	0.0	0.0	0.0	0.0	0.0

WHITE PERCH

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO. /1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/05/76	9.7	137.	1095.7	0.0	0.0	0.0	0.0	0.0
02/11/76	9.7	320.	222.3	0.0	0.0	0.0	0.0	0.0
02/17/76	2.3	115.	177.2	0.0	0.0	0.0	0.0	0.0
02/24/76	3.0	108.	178.0	0.0	0.0	0.0	0.0	0.0
03/02/76	4.9	113.	179.0	0.0	0.0	0.0	0.0	0.0
03/09/76	4.6	106.	1500.3	0.0	0.0	0.0	0.0	0.0
03/16/76	4.3	416.	1855.5	0.0	0.0	0.0	0.0	0.0
03/23/76	5.0	120.	1767.6	0.0	0.0	0.0	0.0	0.0
03/30/76	7.1	130.	1393.8	0.0	0.0	0.0	0.0	0.0
04/06/76	8.5	168.	1455.9	0.0	0.0	0.0	0.0	0.0
04/13/76	7.7	660.	1717.2	0.0	0.0	0.0	0.0	0.0
04/20/76	11.0	94.	1574.7	0.0	0.0	0.0	0.0	0.0
04/27/76	11.3	175.	1630.2	0.0	0.0	0.0	0.0	0.0
05/04/76	13.2	118.	1438.7	0.0	0.0	0.0	0.0	0.0
05/11/76	15.7	120.	1563.3	3.2	1.3	3.2	0.0	4.5
05/18/76	15.4	128.	1549.2	0.0	0.6	1.9	0.0	2.6
05/25/76	19.1	133.	1057.8	5.7	0.0	14.2	0.0	14.2
06/01/76	17.4	150.	292.8	6.8	0.0	6.8	0.0	6.8
06/08/76	19.0	143.	1216.5	6.6	0.0	1.6	0.0	1.6
06/15/76	19.9	158.	1696.2	25.4	0.0	4.1	0.0	4.1
06/22/76	22.8	150.	1493.7	1.3	0.0	8.7	0.0	8.7
06/30/76	23.8	990.	890.4	0.0	0.0	14.6	0.0	14.6
07/13/76	26.0	213.	1290.9	0.0	0.0	4.6	0.0	4.6
07/20/76	26.7	952.	666.0	0.0	0.0	0.0	0.0	0.0
07/27/76	24.9	6364.	740.7	0.0	0.0	0.0	0.0	0.0
08/03/76	25.4	3465.	778.8	0.0	0.0	0.0	0.0	0.0
08/10/76	24.1	760.	701.7	0.0	0.0	0.0	0.0	0.0
08/17/76	25.0	187.	781.5	0.0	0.0	0.0	0.0	0.0
08/24/76	25.3	6250.	688.6	0.0	0.0	0.0	0.0	0.0
08/31/76	24.5	4050.	1002.0	0.0	0.0	0.0	0.0	0.0

STRIPED BASS

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/05/76	9.7	137.	1095.7	0.0	0.0	0.0	0.0	0.0
02/11/76	9.7	320.	222.3	0.0	0.0	0.0	0.0	0.0
02/17/76	2.3	115.	177.2	0.0	0.0	0.0	0.0	0.0
02/24/76	3.0	108.	178.0	0.0	0.0	0.0	0.0	0.0
03/02/76	4.9	113.	179.0	0.0	0.0	0.0	0.0	0.0
03/09/76	4.6	106.	1540.3	0.0	0.0	0.0	0.0	0.0
03/16/76	4.3	416.	1855.5	0.0	0.0	0.0	0.0	0.0
03/23/76	5.0	120.	1767.6	0.6	0.0	0.0	0.0	0.0
03/30/76	7.1	130.	1393.8	0.0	0.0	0.0	0.0	0.0
04/06/76	8.5	163.	1455.9	0.0	0.0	0.0	0.0	0.0
04/13/76	7.7	660.	1717.2	0.0	0.0	0.0	0.0	0.0
04/20/76	11.0	94.	1574.7	0.0	0.0	0.0	0.0	0.0
04/27/76	11.3	175.	1630.2	0.0	0.0	0.0	0.0	0.0
05/04/76	13.2	118.	1430.7	0.7	0.7	0.0	0.0	0.7
05/11/76	15.7	120.	1563.3	92.8	0.6	0.6	0.0	0.6
05/18/76	15.4	128.	1549.2	21.3	18.1	0.0	0.0	18.1
05/25/76	19.1	133.	1057.8	23.6	0.0	0.0	0.0	0.0
06/01/76	17.4	150.	792.8	6.8	3.4	0.0	0.0	3.4
06/08/76	19.0	143.	1216.5	0.8	4.9	0.0	0.0	4.9
06/15/76	19.9	158.	1696.2	0.0	3.5	37.1	0.0	40.7
06/22/76	22.8	136.	1493.7	0.0	0.0	24.8	0.0	24.8
06/30/76	23.8	950.	890.4	0.0	1.1	59.5	0.0	60.6
07/13/76	25.0	213.	1230.9	0.0	0.0	0.0	0.0	0.0
07/20/76	26.7	952.	666.0	0.0	0.0	0.0	0.0	0.0
07/27/76	24.9	6364.	748.7	0.0	0.0	0.0	0.0	0.0
08/03/76	25.4	3465.	778.8	0.0	0.0	0.0	0.0	0.0
08/10/76	24.1	768.	701.7	0.0	0.0	0.0	0.0	0.0
08/17/76	25.0	187.	781.5	0.0	0.0	0.0	0.0	0.0
08/24/76	25.3	6259.	688.6	0.0	0.0	0.0	0.0	0.0
08/31/76	24.5	4050.	1002.0	0.0	0.0	0.0	1.0	1.0

ATLANTIC TONGUE

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/05/76	9.7	137.	1895.7	2.7	0.9	0.0	0.0	0.9
02/11/76	9.7	320.	222.3	0.0	18.0	0.0	0.0	18.0
02/17/76	2.3	115.	177.2	0.0	16.9	0.0	0.0	16.9
02/24/76	3.0	108.	178.0	0.0	0.0	11.2	0.0	11.2
03/02/76	4.9	113.	179.0	0.0	61.5	72.6	0.0	134.1
03/09/76	4.6	106.	1500.3	4.0	198.0	0.7	0.0	198.6
03/16/76	4.3	416.	1855.5	0.0	277.0	199.4	0.0	476.4
03/23/76	5.0	120.	1767.6	0.0	52.6	2.8	0.0	55.4
03/30/76	7.1	134.	1393.8	0.0	2.9	0.0	0.0	2.9
04/06/76	8.5	108.	1455.9	0.0	0.0	0.0	0.0	0.0
04/13/76	7.7	660.	1717.2	0.0	0.0	65.8	14.6	80.4
04/20/76	11.0	94.	1574.7	0.0	0.0	0.0	1.3	1.3
04/27/76	11.3	175.	1638.2	0.0	0.0	0.6	0.6	1.2
05/04/76	13.2	118.	1430.7	0.0	0.0	0.0	0.7	0.7
05/11/76	15.7	126.	1563.3	0.0	0.0	0.0	0.0	0.0
05/18/76	15.4	128.	1549.2	0.0	0.0	0.0	0.0	0.0
05/25/76	19.1	133.	1057.8	0.0	0.0	0.0	0.0	0.0
06/01/76	17.4	150.	292.8	0.0	0.0	0.0	0.0	0.0
06/08/76	19.0	143.	1216.5	0.0	0.0	0.0	0.0	0.0
06/15/76	19.9	158.	1686.2	0.0	0.0	0.0	0.0	0.0
06/22/76	22.8	150.	1403.7	0.0	0.0	0.0	0.0	0.0
06/30/76	23.8	940.	690.4	0.0	0.0	0.0	0.0	0.0
07/13/76	26.0	213.	1298.9	0.0	0.0	0.0	0.0	0.0
07/20/76	25.7	952.	666.0	0.0	0.0	0.0	0.0	0.0
07/27/76	24.9	6364.	748.7	0.0	0.0	0.0	0.0	0.0
08/03/76	27.4	3465.	778.8	0.0	0.0	0.0	0.0	0.0
08/10/76	24.1	760.	701.7	0.0	0.0	0.0	0.0	0.0
08/17/76	25.0	187.	781.5	0.0	0.0	0.0	0.0	0.0
08/24/76	25.3	6250.	883.6	0.0	0.0	0.0	0.0	0.0
08/31/76	24.5	4050.	1002.0	0.0	0.0	0.0	0.0	0.0

CLUPEIDS

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/05/76	9.7	137.	1095.7	0.0	0.0	0.0	0.0	0.0
02/11/76	9.7	320.	222.3	0.0	0.0	0.0	0.0	0.0
02/17/76	2.3	115.	177.2	0.0	0.0	0.0	0.0	0.0
02/24/76	3.0	108.	178.0	0.0	0.0	0.0	0.0	0.0
03/02/76	4.9	113.	179.0	0.0	0.0	0.0	0.0	0.0
03/09/76	4.6	106.	1500.3	0.0	0.0	0.0	0.0	0.0
03/16/76	4.3	496.	1855.5	0.0	0.0	0.0	0.0	0.0
03/23/76	5.0	120.	1767.6	0.0	0.0	0.0	0.0	0.0
03/30/76	7.1	130.	1393.8	0.0	0.0	0.0	0.0	0.0
04/06/76	8.5	108.	1455.9	0.0	0.0	0.0	0.0	0.0
04/13/76	7.7	660.	1717.2	0.0	0.0	0.0	0.0	0.0
04/20/76	11.8	94.	1574.7	0.0	0.0	0.0	0.0	0.0
04/27/76	11.3	175.	1630.2	0.0	0.0	0.6	0.0	0.6
05/04/76	13.2	118.	1430.7	0.0	0.0	21.7	0.0	21.7
05/11/76	15.7	120.	1563.3	20.5	3.2	19.2	0.0	22.4
05/18/76	13.4	128.	1549.2	9.0	9.0	45.8	0.0	54.9
05/25/76	19.1	133.	1057.8	1.9	10.4	326.1	0.0	336.5
06/01/76	17.4	150.	292.8	0.0	0.0	587.4	0.0	587.4
06/08/76	19.0	143.	1216.5	15.6	2.5	92.1	0.0	94.5
06/15/76	19.9	158.	1696.2	7.1	0.6	61.9	0.0	62.5
06/22/76	22.8	150.	1493.7	6.0	0.0	6.0	0.0	6.0
06/29/76	23.0	990.	890.4	0.0	0.0	19.1	0.0	19.1
07/13/76	26.0	213.	1290.9	0.0	0.0	0.0	0.0	0.0
07/20/76	26.7	952.	666.0	0.0	0.0	0.0	0.0	0.0
07/27/76	24.9	6364.	740.7	0.0	0.0	0.0	0.0	0.0
08/03/76	25.4	3465.	778.8	0.0	0.0	0.0	0.0	0.0
08/10/76	24.1	760.	701.7	0.0	0.0	0.0	0.0	0.0
08/17/76	25.0	187.	781.5	0.0	0.0	0.0	0.0	0.0
08/24/76	25.3	6250.	888.6	0.0	0.0	0.0	0.0	0.0
08/31/76	24.5	4050.	1002.0	0.0	0.0	0.0	0.0	0.0

HR Library #2090

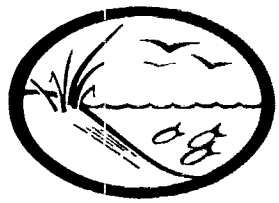
Bowline Point Generating Station Entrainment and Impingement Studies

1976 ANNUAL REPORT

Prepared for:
Orange and Rockland Utilities, Inc.

Prepared by:

ECOLOGICAL ANALYSTS, INC.



BOWLINE POINT GENERATING STATION
ENTRAINMENT AND IMPINGEMENT STUDIES

1976 ANNUAL REPORT

Prepared for:

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared by:

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

December 1977

CONTENTS

		Page
1.	INTRODUCTION	1.1-1
2.	SUMMARY	2.1-1
	2.1 ENTRAINMENT SURVIVAL	2.1-1
	2.1.1 Ichthyoplankton	2.1-1
	2.1.2 Zooplankton	2.1-2
	2.1.3 Phytoplankton	2.1-3
	2.2 ENTRAINMENT ABUNDANCE	2.2-1
	2.2.1 Ichthyoplankton	2.2-1
	2.2.2 Zooplankton	2.2-2
	2.3 IMPINGEMENT SURVIVAL	2.3-1
3.	THE BOWLINE POINT GENERATING STATION	3.1-1
	3.1 SITE DESCRIPTION	3.1-1
	3.2 THE POWER PLANT	3.2-1
4.	ENTRAINMENT SURVIVAL	4.1-1
	4.1 ICHTHYOPLANKTON	4.1-1
	4.1.1 Introduction	4.1-1
	4.1.2 Methods	4.1-2
	4.1.3 Results and Discussion	4.1-5
	REFERENCES	
	4.2 ZOOPLANKTON	4.2-1
	4.2.1 Introduction	4.2-1
	4.2.2 Macrozooplankton	4.2-2
	4.2.3 Microzooplankton	4.2-20
	REFERENCES	
	4.3 PHYTOPLANKTON	4.3-1
	4.3.1 Introduction	4.3-1
	4.3.2 Methods and Materials	4.3-1
	4.3.3 Results	4.3-11
	4.3.4 Summary	4.3-27
	REFERENCES	

	Page
5. ENTRAINMENT ABUNDANCE	5.1-1
5.1 ICHTHYOPLANKTON	5.1-1
5.1.1 Introduction	5.1-1
5.1.2 Methods and Materials	5.1-2
5.1.3 Results and Discussion	5.1-5
REFERENCES	
6. IMPINGEMENT SURVIVAL	6.1-1
6.1 INTRODUCTION	6.1-1
6.2 METHODS AND MATERIALS	6.2-1
6.3 RESULTS AND DISCUSSION	6.3-1
6.3.1 Survival Observed at the Impingement Collection Pit and Discharge Pipe	6.3-1
6.3.2 Effects of Screenwash Operating Mode	6.3-15
6.3.3 Effects of Salinity	6.3-20
REFERENCES	
APPENDIX A: ICHTHYOPLANKTON--EVALUATION OF COLLECTION TECHNIQUES USED FOR ICHTHYOPLANKTON ENTRAINMENT SURVIVAL STUDIES AT POWER PLANTS	
APPENDIX B: RAW DATA FROM INDIVIDUAL EXPERIMENTS WITH STRIPED BASS LARVAE	

LIST OF FIGURES

Number	Title
3.1-1	Location of steam electric generating stations along the Lower Hudson River Estuary.
3.1-2	Diagram of Bowline Point plant site.
3.1-3	Depth contours in Bowline Pond.
3.1-4	Mean daily water conductivity measured at the Bowline Point plant intake structure, 1976.
3.1-5	Mean water temperatures at the intake of the Bowline Point plant, 1976.
4.1-1	Design of the larval collection tables used in the Bowline Point entrainment survival studies beginning in May 1976.
4.1-2	Work flow diagram of ichthyoplankton survival determination.
4.1-3	Seasonal distribution of ichthyoplankton collected for survival study at the Bowline Point plant circulating water discharge, 1976.
4.1-4	Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Bowline Point plant, 1976.
4.1-5	Latent survival of striped bass juveniles collected at the intake and discharge of the Bowline Point plant, 1976.
4.1-6	Latent survival of white perch post-yolk-sac larvae collected at the Bowline Point plant, 1976.
4.2-1	Empirical and predicted initial entrainment mortality in relation to discharge temperature for Gammarus daiberi.
4.2-2	Empirical and predicted initial entrainment mortality in relation to discharge temperature for Chaoborus punctipennis.
4.2-3	Empirical and predicted initial entrainment mortality in relation to discharge temperature for Neomysis americana.
4.2-4	Latent entrainment mortality of Gammarus daiberi at the Bowline Point plant during 1975 and 1976.
5.1-1	Mean daily densities of fish larvae and juveniles collected with nets at the Bowline Point plant intake during 1976.
5.1-2	Mean daily densities of fish larvae and juveniles collected with the three-depth manifold pump system at the Bowline Point plant intake during 1976.

LIST OF FIGURES (CONT.)

Number	Title
6.2-1	Schematic of the Bowline Point Generating Station intake structure.
6.2-2	Flow-through holding facility for impingement survival studies at the Bowline Point plant.
6.3-1	Latent survival curves for white perch impinged at the Bowline Point plant intake on 2 November and 16 November 1976.
6.3-2	Relationship between long-term survival of impinged white perch and conductivity for continuous screenwash operation at the Bowline Point plant.
A.2-1	Design of larval collection tables used in the Bowline Point entrainment survival studies during 1975 and in March 1976.
A.2-2	Design of the larval collection tables used in the Bowline Point entrainment survival studies beginning in May 1976.
A.2-3	Illustration of pump net entrainment survival sampling apparatus.

LIST OF TABLES

Number	Title
3.1-1	Bowline Pond intake water quality analyses: mean ambient water temperature, dissolved oxygen, and pH, 1976.
3.2-1	Plant design data for each unit of the Bowline Point plant.
3.2-2	Total cooling water flow, intake and discharge pipe velocities, and intake approach velocities for various pump operating modes, Bowline Point plant.
3.2-3	Calculated maximum time-temperature regimes of exposure during transit through the Bowline Point plant Unit 2 cooling-water system.
3.2-4	Circulating water flow and ΔT data for Unit 1 at the Bowline Point plant, 1976.
3.2-5	Circulating water flow and ΔT data for Unit 2 at the Bowline Point plant, 1976.
4.1-1	Total number of each taxon and life stage collected for survival determinations at the Bowline Point plant, 1976.
4.1-2	Common and scientific names for fish species obtained in entrainment viability collections.
4.1-3	Length-frequencies by sampling week for striped bass and white perch collected during survival studies at the intake and discharge of the Bowline Point plant, 1976.
4.1-4	Mean initial and 96-hour survival of each taxon and life stage at the Bowline Point plant intake and discharge, 1976.
4.1-5	Survival of ichthyoplankton at the Bowline Point discharge as a function of temperature exposure.
4.1-6	Estimated entrainment survival of ichthyoplankton at the Bowline Point plant, 1976.
4.2-1	Evaluation of macrozooplankton initial survival data at the Bowline Point plant, 1975.
4.2-2	Evaluation of macrozooplankton initial survival at the Bowline Point plant, 1976.
4.2-3	Evaluation of macrozooplankton latent survival data at the Bowline Point plant, 1975.
4.2-4	Evaluation of macrozooplankton latent survival data at the Bowline Point plant, 1976.

LIST OF TABLES (CONT.)

Number	Title
4.2-5	Results of multiple linear regression models predicting thermal mortality for Gammarus daiberi, Chaoborus punctipennis, and Neomysis americana.
4.2-6	Evaluation of microzooplankton initial survival data at the Bowline Point plant, 1975.
4.2-7	Evaluation of microzooplankton initial survival data at the Bowline Point plant, 1976.
4.2-8	Evaluation of microzooplankton combined initial and latent survival data at the Bowline Point plant, 1975.
4.2-9	Evaluation of microzooplankton combined initial and latent survival data at the Bowline Point plant, 1976.
4.2-10	Initial mortality estimates for microzooplankton entrained at the Bowline Point plant, 1975.
4.2-11	Combined initial and latent mortality estimates for microzooplankton at the Bowline Point plant, 1975 and 1976.
4.2-12	Frequencies of occurrence of entrainment mortality levels in 1975 and 1976.
4.2-13	Bowline Point plant pumping schedule for microinvertebrate sampling dates in 1976.
4.3-1	Statistical comparisons made with the student's t-test at the Bowline Point plant, 1976.
4.3-2	Fluorescence microscopy data tested for equality of two percentages at the Bowline Point plant, 1976.
4.3-3	Seasonal grouping of sampling dates and associated ambient and discharge temperatures observed at the Bowline Point plant for phytoplankton studies, 1976.
4.3-4	Total phytoplankton density and biomass at Bowline Point plant intake and discharge, 1976.
4.3-5	Percentage composition of the algal divisions in the community structure at the Bowline Point plant as determined by fluorescence microscopy, 1976.
4.3-6	Bowline Point plant phytoplankton species list, 1976.
4.3-7	Primary productivity rates at the Bowline Point plant intake and discharge as determined by carbon-14 uptake, 1976.

LIST OF TABLES (CONT.)

Number	Title
4.3-8	Assimilation numbers at the Bowline Point plant intake and discharge, 1976.
4.3-9	Chlorophyll a concentrations at the Bowline Point plant intake and discharge, 1976.
4.3-10	Chlorophylls b and c and phycoerythrin concentrations at the Bowline Point plant intake and discharge, 1976.
4.3-11	Adenosine triphosphate levels at the Bowline Point plant intake and discharge, 1976.
4.3-12	Percentage of healthy organisms in the algal divisions of the community structure at the Bowline Point plant intake and discharge as determined by fluorescence microscopy, 1976.
5.1-1	Bowline plant intake through-net velocities as a function of tidal height, circulator pump operation, and sampling depth.
5.1-2	Number and percent composition by life stage of ichthyoplankton collected by nets during abundance sampling at the Bowline Point plant intake, 1976.
5.1-3	Daily average density of fish by life stage and sample date from net collections at the Bowline Point plant, 1976.
5.1-4	Seasonal average as a function of depth and life stage for striped bass, white perch, Atlantic tomcod, clupeids, and bay anchovy obtained from net collections at the Bowline Point plant intake, 1976.
5.1-5	Daily average densities by life stage and time of day for species obtained from net collections at the Bowline plant intake, 1976.
5.1-6	Fish species length-frequency distribution and mean, range, and standard error of lengths on a weekly basis for net collections at the Bowline Point intake, 1976.
5.1-7	Number and percent composition by life stage of ichthyoplankton collected using the three-depth manifold pump system at the Bowline Point plant intake, 1976.
5.1-8	Daily average density by life stage and sample date for fish collected with the three-depth manifold pump system at the Bowline Point plant intake, 1976.

LIST OF TABLES (CONT.)

Number	Title
5.1-9	Fish species length-frequency distribution and mean, range, and standard error of lengths on a weekly basis for pump collections at the Bowline Point intake, 1976.
6.3-1	Total number of each species of fish collected for impingement survival studies at the Bowline Point plant, 1976.
6.3-2	Screenwash operating conditions during impingement survival studies at the Bowline Point plant, 1976.
6.3-3	Summary of physicochemical monitoring of impingement survival holding facilities of the Bowline Point plant, 1976.
6.3-4	Impingement survival at the Bowline Point plant collection pit samples, 1976.
6.3-5	Survival of controls--Bowline Point Generating Station impingement collection pit.
6.3-6	Impingement survival at the Bowline Point plant discharge pipe samples, 1976.
6.3-7	Comparison of sampling control survival for white perch at the sluiceway collection pit and discharge pipe.
6.3-8	Comparison of initial and latent survival of white perch during continuous and intermittent screenwash operation.
6.3-9	Initial proportion of white perch surviving impingement and associated conductivity values for continuous screenwash operation at the Bowline Point plant, 1976.
A.3-1	Percent survival of larvae exposed to table and net receiving systems.
A.3-2	Percent survival of larvae exposed to three pump types.
A.3-3	Percent mortality of larvae exposed to three pump types.
A.3-4	Percent survival of larvae exposed to various feeding holding container conditions.
A.3-5	Percent survival of larvae exposed to variable head, rpm, and flow for the midwhirl pump.
B-1	Raw data for striped bass larvae exposed to table and net receiving systems.
B-2	Raw data for striped bass larvae exposed to three pump types.

LIST OF TABLES (CONT.)

Number	Title
B-3	Raw data for striped bass pump mortality calculations.
B-4	Raw data for striped bass larvae exposed to variable head, rpm, and flow for the midwhirl pump.
B-5	Raw data for striped bass larvae used in feeding experiments, holding container experiments, and held as controls.

CHAPTER 1: INTRODUCTION

The objective of the research program described in this annual progress report was to determine the effect of condenser cooling water entrainment and intake-screen fish impingement at the Bowline Point Generating Station on Hudson River aquatic biota.

Steam electric power plants use large amounts of water for cooling condensers and auxiliary systems. Each of the Bowline Point plant's two, 600-MW(e) fossil-fueled units uses a once-through cooling system, and together the units have a combined maximum design pumping capacity of 2,090,880 m^3/day. Aquatic organisms small enough to pass through the traveling screens are pumped through the cooling water system of the power plant and are exposed to abrupt changes in temperature, hydrostatic pressure, mechanical buffeting, and velocity shear forces. Organisms too large to pass through the traveling screens such as fish and large invertebrates are susceptible to impingement on the screens.

Aquatic organisms subject to entrainment include bacteria and small plant and animal life, especially those forms that are planktonic (float or drift almost passively), such as phytoplankton (plants), zooplankton (invertebrate animals), and ichthyoplankton (eggs and larvae of fish). These groups differ greatly with respect to abundance, distribution, reproductive characteristics, generation time, food-chain function, and other life processes. Thus, entrainment effects differ greatly.

The entrainment and impingement survival studies described in this report and those performed at Indian Point and other power plants on the Hudson River are an essential element of a broader study of power plant impact on

the Hudson River aquatic community. These studies address the combined effects of entrainment and impingement of all the power plants operating on the Hudson River.

The general design of the research program was described in a scope of studies developed between Orange and Rockland and Ecological Analysts in early 1976. The specific objective was to determine the survival rate of organisms that have been entrained through the condenser cooling water systems or impinged at the intake screens of the Bowline Point plant for use in evaluation of the impact of entrainment and impingement on populations in the Hudson River.

Entrainment survival included studies on phytoplankton, zooplankton, and larvae and juveniles of fish (ichthyoplankton). Entrained biota were collected from both the intake and discharge water, and survival was noted initially and during a latent-effects observation period. Survival through the plant was to be determined by direct comparison of survival from intake and discharge. Specimens collected at the intakes served as controls for estimating the percentage survival of organisms entrained through the condenser cooling system. Sampling frequency was dependent on the seasonal occurrence of specific organism groups.

Impingement survival studies focused on several key species of anadromous fish collected on the intake screens, including the Atlantic tomcod (Microgadus tomcod), white perch (Morone americana), striped bass (Morone saxatilis), alewife (Alosa pseudoharengus), and blueback herring (Alosa aestivalis). Survival was determined under various intake screen operational modes. Sampling frequency was to coincide with general seasonal peak impingement periods.

CHAPTER 2: SUMMARY

2.1 ENTRAINMENT SURVIVAL

2.1.1 Ichthyoplankton

Striped bass, white perch, Atlantic tomcod, bay anchovy, and members of the clupeid family (herrings) were the most abundant species collected at the Bowline Point Generating Station during survival studies. Post-yolk-sac larvae were caught in higher numbers than the other life stages for all species except Atlantic tomcod (primarily yolk-sac stage).

Peak larval densities (as determined from survival collections) were observed in mid-March for Atlantic tomcod. Clupeid larvae were collected in peak numbers in late May, whereas striped bass and white perch reached peak abundances in early and late June. Bay anchovies were most abundant in late July.

Measurements were made on Morone spp. collected during survival studies. Weekly mean lengths for intake and discharge were comparable for white perch and striped bass collected during survival sampling.

Initial survival of species collected at the plant intake (sampling controls) was consistent with that measured in the 1975 survival studies (Ecological Analysts 1976). Control (intake) survival was generally higher for juveniles than for other life stages.

Initial survival at the discharge stations was high for most species and life stages. Latent survival at the discharge was similar to that at the intake. The similarity of the curves for intake and discharge

samples indicated that most of the latent mortality results from damage incurred during sample collection, transfer, and holding.

Survival of the five most abundant species at the Bowline Point discharge was studied as a function of exposure temperature. Results indicate that survival decreases steadily with increase in discharge water temperature above 30 C. This observation is consistent with results of laboratory and field studies of fish larvae thermal tolerance.

The effect of the plant on survival of ichthyoplankton was estimated through comparison of intake and discharge initial survival data. The results indicate that there is no significant difference between intake and discharge survival at low exposure temperature for white perch, clupeids, or bay anchovy. Striped bass larvae survival was also high at discharge temperatures below 30 C. Survival of the above taxa was low for discharge water temperatures exceeding 33 C.

The data collected at the Bowline Point plant indicate that thermal exposure is the primary factor influencing survival of entrained fish larvae. Mechanical damage from entrainment appeared to be of minor importance under normal plant operating conditions.

2.1.2 Zooplankton

Entrainment effects on major macrozooplankton species are minimal at discharge temperatures below upper lethel temperatures. Background mortality estimates, generally less than 10 percent, are attributable to mechanical, pressure, or other nonthermal effects. At temperatures above the critical threshold level for each macrozooplankton species, dramatic increases in

mortality are expected. This threshold lies at or above 37 C during midsummer except for Neomysis americana (32 C).

Entrainment mortality of microzooplankton was generally minimal (less than 20 percent), and was not related to discharge temperatures over the observed range (11-37 C). Microzooplankton entrainment mortality was higher in the spring and fall 1976, when the units sampled were operating with the circulation pumps in the two-pump throttled mode. This mode may be characterized by high mechanical and pressure stresses, leading to increased mortality. Microzooplankton initial and latent entrainment mortality estimates were of similar magnitude. There appear to be no delayed lethal entrainment effects.

2.1.3 Phytoplankton

The occurrence of significant differences between intake and discharge samples was unrelated to discharge temperatures for all parameters studied. No significant differences were detected for primary productivity rates, fluorescence densities, and biomass. The reduction in density noted in April is probably attributable to plankton patchiness. The only significant reductions noted for pigment levels occurred during the period of no thermal load. While ATP levels were generally lower in the discharge samples, the occurrences of significant reductions could not be correlated to discharge temperatures.

The initial and latent discharge percentage healthy results were similar. Numerous significant reductions were observed for the various algal divi-

2.2 ICHTHYOPLANKTON ENTRAINMENT ABUNDANCE

Ichthyoplankton entrainment abundance studies were carried out using two distinct sampling devices: stationary plankton nets and a pump apparatus--both capable of sampling from three depths at the plant intake. Less than 2.2 percent of the total abundance collection (from the three-depth pump apparatus) consisted of species other than Atlantic tomcod, bay anchovy, striped bass, white perch, and clupeids. Striped bass constituted less than 2.2 percent of the net collections. Bay anchovy was the most abundant species (72.4 percent of the net collections).

Mean larval densities for the five major species were comparable for both net and pump collections at the intake. Length-frequency results indicate, however, that the intake pump system was more efficient in collecting juveniles and large larvae than the stationary plankton nets.

Post-yolk-sac larvae of Atlantic tomcod exhibited a peak abundance in mid-April (pump collections). Striped bass and white perch reached peak larval densities from early to late June, bay anchovy in late July (pump and net collections at the intake). Seasonal trends in peak ichthyoplankton abundance as compared to seasonal fluctuations in salinity indicate a close correlation between periods of peak abundance and periods of high ambient water conductivity (μmho).

Depth studies indicate that the highest larval densities are found in the middle to bottom strata of the water column.

Results of diel studies show that the highest ichthyoplankton densities (no./1,000 m^3) generally occur during the night.

2.3 IMPINGEMENT SURVIVAL

White perch in their first year of life accounted for over 90 percent of the total number of fish collected during the impingement survival studies. Initial survival was generally high (60-100 percent) for all species except clupeids. Latent survival (96-hour) was consistently highest for Atlantic tomcod. Latent survival of white perch and striped bass varied widely among sample collection dates, but was not statistically different between the two species at 96 hours. Clupeids died within 24 hours of collection in all samples except one.

Control survival data collected to date indicate that the effects of collection, handling, and latent effects holding probably account for a significant portion of the mortality observed in impingement collections of white perch and striped bass. Survival of fish collected at the exit of the sluiceway discharge pipe showed the same relative sensitivity among species as the impingement collection pit samples.

Comparisons of screenwash frequency and pressure on survival of impinged fish indicate that a higher initial and latent mortality is associated with the intermittent screenwash mode than with the continuous screen wash. The results indicate that the mechanical damage to the fish from the screenwash system is small in comparison to the debilitation and death produced in front of or on the screens prior to washing.

Latent (96-hour) survival for white perch was found to be positively correlated with water conductivity at the time of the impingement survey.

CHAPTER 3: THE BOWLINE POINT GENERATING STATION

3.1 SITE DESCRIPTION

The Bowline Point Generating Station is situated on the west bank of the Hudson River Estuary, approximately 60 km north of the southern tip of Manhattan. The river broadens in the area of the plant site into what is commonly known as Haverstraw Bay. Figure 3.1-1 shows the location of the Bowline Point plant in relation to the six other electric generating stations on the lower estuary.

The river is about 4.8 km wide, and has a cross-sectional area of 19,000 m^2 at the Bowline Point site. Flow rates at this location, as in the lower estuary in general, are controlled predominantly by the tides. The tidal flow has an average rate of 5,000 m^3/sec in comparison to a freshwater discharge rate which ranges from a monthly mean of about 175 m^3/sec during summer drought to 1,750 m^3/sec during spring freshet. Salinity in the northern end of Haverstraw Bay ranges from that characteristic of freshwater up to 25 percent of that characteristic of seawater. Seasonal trends are primarily controlled by the amount of freshwater discharge from the watershed. During periods of low runoff, however, the salinity in the vicinity of Bowline Point may fluctuate rapidly as a function of tidal stage and height.

Water for the condenser cooling-water system of the power plant is withdrawn from a small embayment of the estuary known as Bowline Pond and returned directly to the Hudson River through an offshore jet diffuser (Figure 3.1-2). Bowline Pond has a surface area of 490,000 m^2 and a volume of about 1,700,000 m^3. Pond water exchanges with river water through a small inlet, which is

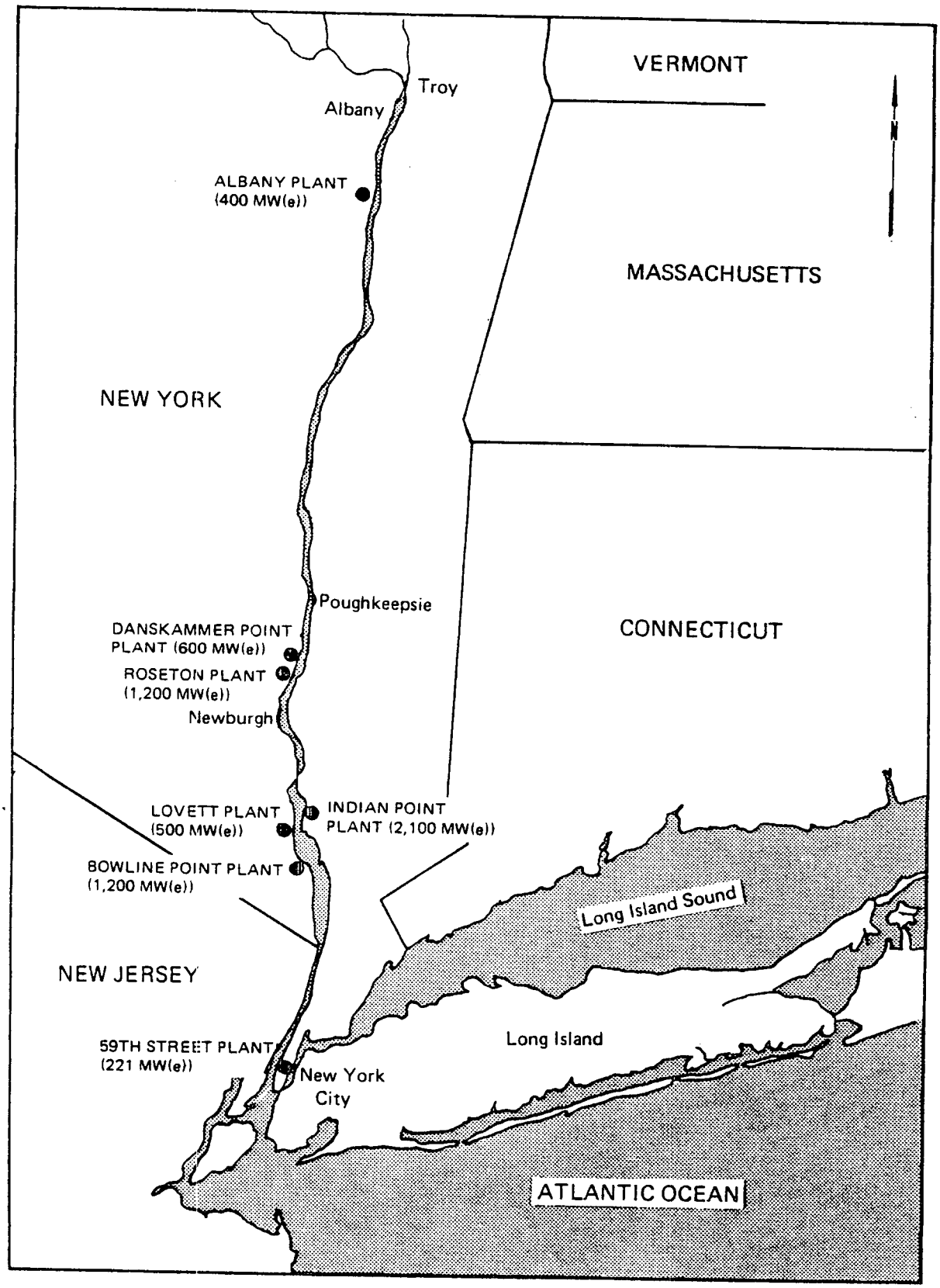


Figure 3.1-1. Location of steam electric generating stations along the Lower Hudson River estuary (Scale = 1/1,267,200).

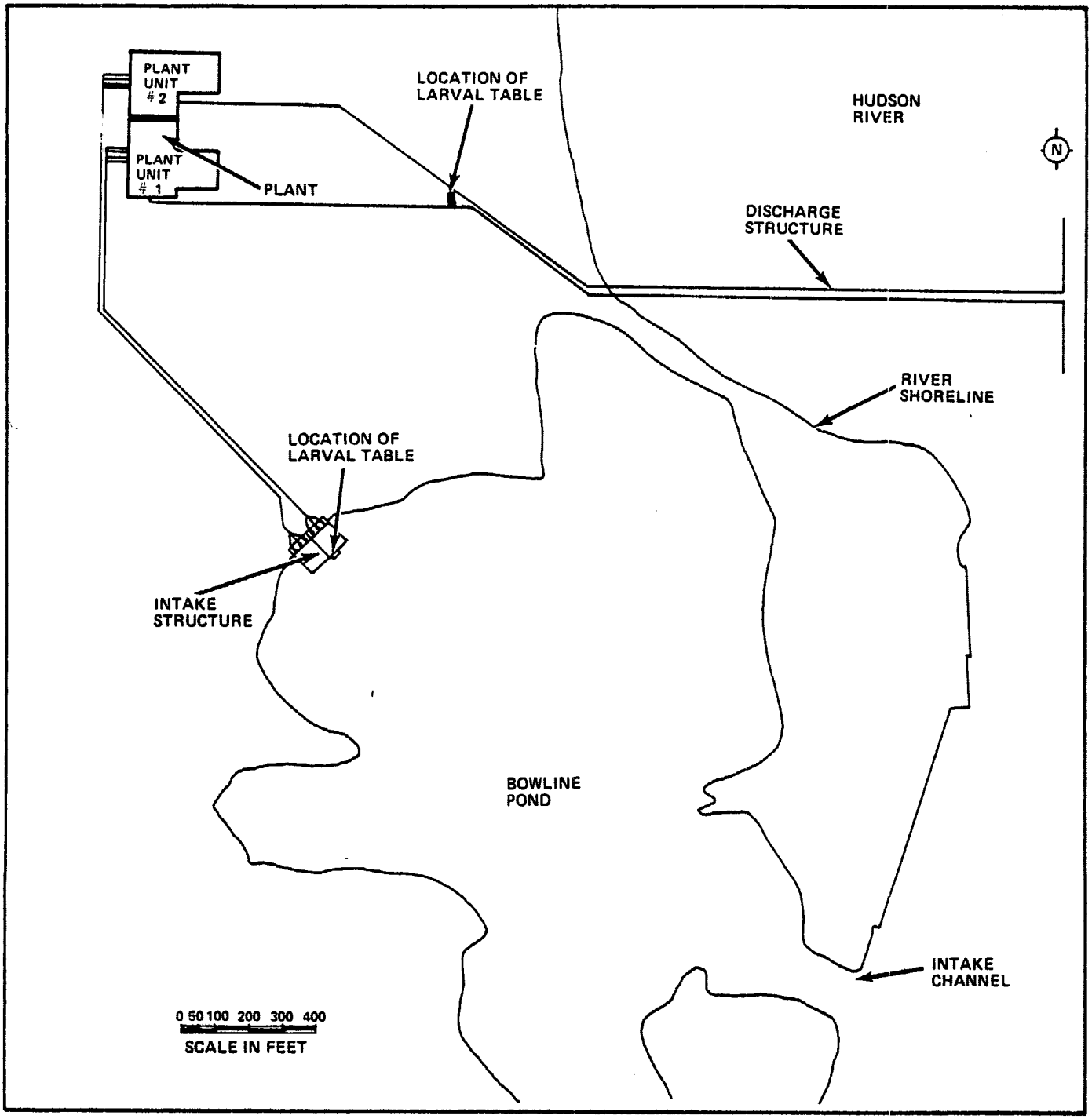


Figure 3.1-2. Diagram of Bowline Point plant site.

about 60 m wide and has a maximum depth of 3-4 m. The maximum depth in the pond is 12-15 m (Figure 3.1-3). Because of its physical connection with the estuary, the pond is also subject to salinity intrusion.

Conductivity measurements taken at the intake structure during 1976 are shown in Figure 3.1-4. Temperature, dissolved oxygen, and pH values measured in the pond are characteristic of those occurring in the estuary (Figure 3.1-5 and Table 3.1-1).

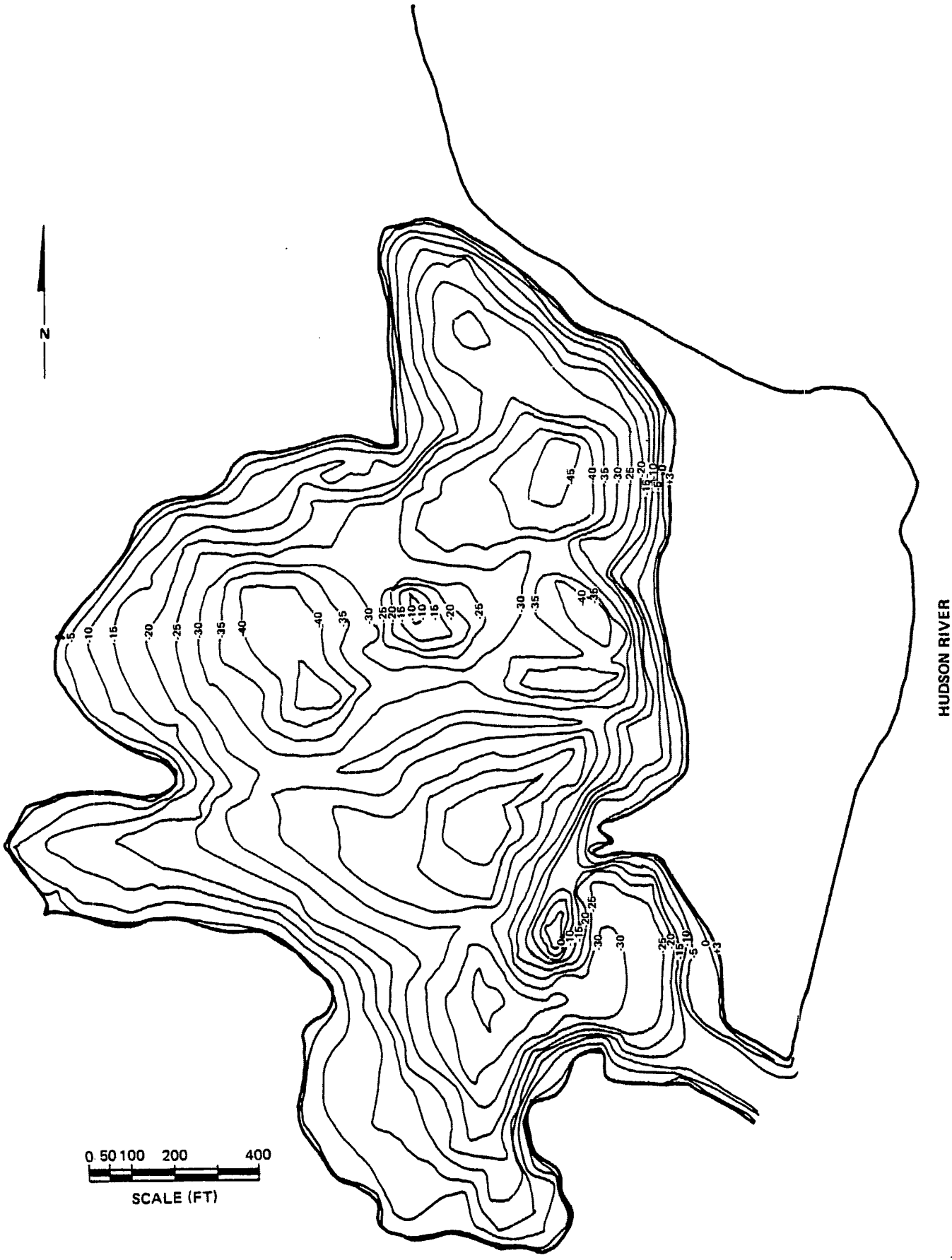


Figure 3.1-3. Depth contours (5-ft) in Bowline Pond.

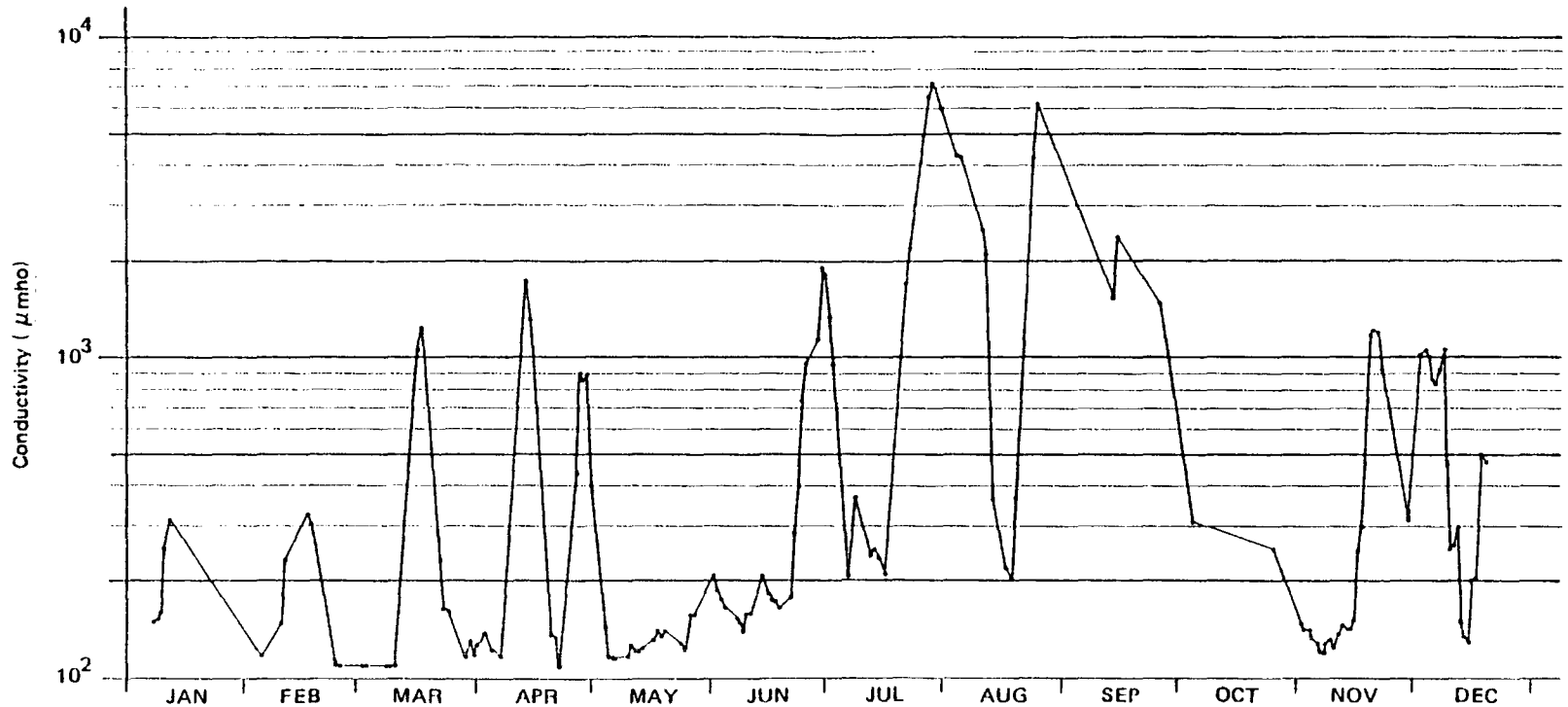


Figure 3.1-4. Mean daily water conductivity measured at the Bowline Point plant intake structure, 1976 (bottom depth).

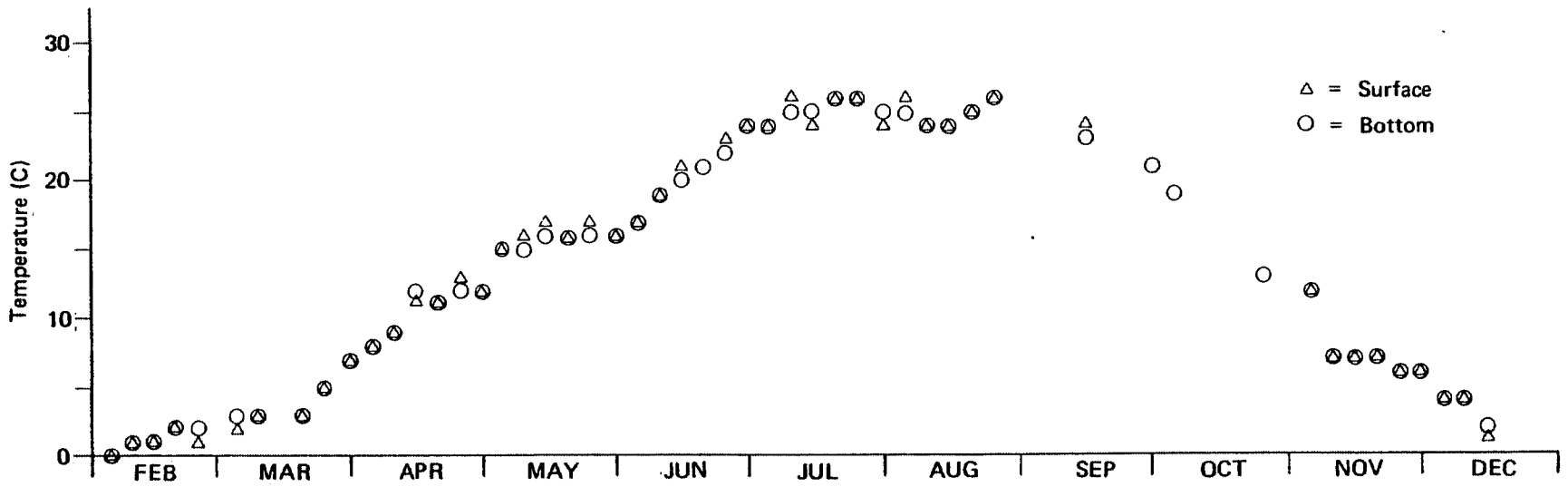


Figure 3.1-5. Mean water temperatures at the intake of the Bowline Point plant, 1976.

TABLE 3.1-1 BOWLINE POND INTAKE WATER QUALITY ANALYSES: MEAN AMBIENT WATER TEMPERATURE, DISSOLVED OXYGEN, AND pH, 1976

Date	Temperature (C)		Dissolved Oxygen (mg/liter)		pH	
	Surface	Bottom	Surface	Bottom	Surface	Bottom
1 - 5 FEB	0.2	0.3	12.9	12.7	7.5	7.4
6 - 10 FEB	0.6	0.7	13.0	12.6	7.6	7.3
11 - 15 FEB	0.8	0.9	13.2	12.7	7.7	7.5
16 - 20 FEB	1.8	1.6	13.9	13.4	7.7	7.5
21 - 29 FEB	1.5	1.6	12.8	11.9	7.0	6.9
1 - 5 MAR	2.5	2.5	12.4	13.2	7.9	7.7
6 - 10 MAR	2.6	2.7	13.7	13.0	8.3	7.7
11 - 20 MAR	2.9	3.1	13.2	11.7	7.5	7.6
21 - 25 MAR	5.1	5.1	12.2	12.3	7.8	7.6
26 - 31 MAR	7.0	7.1	11.6	11.5	7.4	7.3
1 - 7 APR	8.2	8.0	11.2	10.8	7.7	7.7
8 - 15 APR	8.3	8.2	11.0	10.7	7.7	7.7
16 - 24 APR	11.4	11.3	10.5	10.4	7.7	7.5
25 - 30 APR	11.4	11.1	10.3	10.0	7.8	7.7
1 - 7 MAY	13.3	13.1	9.3	9.1	7.5	7.4
8 - 15 MAY	16.3	15.6	9.4	9.3	7.6	7.5
16 - 23 MAY	16.0	15.6	8.5	8.2	7.2	7.1
24 - 31 MAY	16.4	16.3	9.6	9.3	7.2	7.2
1 - 7 JUN	17.4	17.3	8.7	8.5	7.1	7.0
8 - 14 JUN	19.3	18.6	10.0	9.1	7.2	7.2
15 - 21 JUN	20.8	20.0	10.9	10.4	8.2	7.3
22 - 30 JUN	22.8	22.4	9.8	8.7	7.9	7.6
1 - 7 JUL	25.3	25.1	7.6	7.5	7.4	7.5
8 - 14 JUL	23.9	24.2	7.5	7.4	7.5	7.7
15 - 21 JUL	25.9	25.7	8.2	7.2	7.3	7.2
22 - 31 JUL	24.7	24.7	7.2	6.1	7.8	7.4
1 - 7 AUG	25.7	24.9	7.1	6.5	--	--
8 - 14 AUG	24.3	24.3	7.3	6.9	7.6	7.4
15 - 24 AUG	24.9	24.8	7.6	7.5	7.4	7.3
13 SEP	--	23.5	--	7.3	--	7.5
14, 15 SEP	23.9	23.1	7.2	6.8	7.8	7.8
27 SEP	--	21.0	--	7.2	--	7.5
4 OCT	--	18.9	--	7.9	--	7.4
25 OCT	--	12.8	--	9.3	--	--

TABLE 3.1-1 (CONT.)

Date	Temperature (C)		Dissolved Oxygen (mg/liter)		pH	
	Surface	Bottom	Surface	Bottom	Surface	Bottom
1 - 5 NOV	9.5	9.5	10.2	9.9	--	7.9
6 - 10 NOV	7.0	7.0	11.2	10.9	--	7.4
11 - 20 NOV	7.1	7.0	10.7	10.7	7.9	7.5
21 - 25 NOV	5.9	5.8	10.3	10.3	8.4	8.1
26 - 30 NOV	5.7	5.6	10.6	10.5	8.3	8.0
1 - 5 DEC	3.9	3.9	11.8	12.0	7.8	7.8
6 - 10 DEC	3.9	3.8	11.3	11.9	7.8	7.9
11 - 15 DEC	1.4	1.5	12.7	13.7	7.6	7.6

3.2 THE POWER PLANT

The Bowline Point Generating Station consists of two nearly identical oil-fired units. Unit 1 and Unit 2 began operation in September 1972 and May 1974, respectively. Each unit has a maximum generating capacity of 600 MW(e), and a maximum condenser cooling-water flow of 24.2 m^3/second (384,000 gpm). Plant design characteristics are summarized in Table 3.2-1.

The cooling-water circulating systems of Units 1 and 2 are completely separate. Each system incorporates standard bar racks and 9.5-mm mesh vertical traveling screens for removal of debris at the intake. Cooling water is discharged through a submerged jet diffuser about 400 m from the river shoreline (Figure 3.1-2). Each unit contains three circulating water pumps which can be operated individually or in combination at either full or intermediate throttled flow. Circulating water flow and approach velocities at the bar racks are listed in Table 3.2-2 for each mode of pump operation. During 1976, the plants were normally operated in one of two pumping modes: two pumps throttled (370 x 10^6 gpd), or two pumps full (455 x 10^6 gpd).

Temperature elevations in the circulating water system are a function of generating load and coolant flow. For a given rate of heat rejection, an increase in cooling-water flow will reduce the delta-T to which the entrained organism is exposed, and decrease the duration of exposure (i.e., transit time through the system). Calculated maximum temperature/ time regimes of exposure for standard pumping modes at Units 1 and 2 are presented in Table 3.2-3. In practice, electrical output required from Bowline Point varies depending upon electrical demand. Circulating water flows and temperature elevations observed in the condenser cooling water during 1976 are shown for Units 1 and 2 in Tables 3.2-4 and 3.2-5, respectively.

TABLE 3.2-1 PLANT DESIGN DATA FOR EACH UNIT OF THE BOWLINE POINT PLANT

Generator Characteristics	
Maximum generating capacity	620 MW(e)
Cooling water flow rate:	
Condenser (maximum)	23.7 m^3/sec (375,000 gpm)
Service	0.5 m^3/sec (8,500 gpm)
Intake Characteristics	
Maximum approach velocity to screens	0.23 m/sec (0.77 fps)
Pipe diameter from intake to condenser	3.2 m (10.5 ft)
Length of intake tunnel:	
Unit 1	400 m (1,310 ft)
Unit 2	470 m (1,540 ft)
Tunnel velocity (maximum)	3 m/sec (10 fps)
Discharge Characteristics	
Total length of discharge tunnel:	
Unit 1	860 m (2,820 ft)
Unit 2	875 m (2,870 ft)
Pipe diameter from condenser to discharge ports	3.2 m (10.5 ft)
Tunnel velocity (maximum)	3 m/sec (10 fps)
Length of diffuser	67 m (220 ft)
Number of diffuser ports	8
Initial jet velocity	4.6 m/sec (15 fps)

TABLE 3.2-2 TOTAL COOLING WATER FLOW, INTAKE AND DISCHARGE PIPE VELOCITIES, AND INTAKE APPROACH VELOCITIES FOR VARIOUS PUMP OPERATING MODES, BOWLINE POINT PLANT

Number of Pumps Operating	Total Flow at Mean Water Elevation m^3/sec (gpm)	Intake and Discharge Pipe Velocity m/sec (fps)	Intake Approach Velocity m/sec (fps)
3	24.2 (384,000)	3.02 (9.91)	0.23 (0.77)
2	20.0 (316,000)	2.50 (8.20)	0.18 (0.59)
1	11.7 (184,000)	1.46 (4.79)	0.11 (0.36)
2 (throttled)	16.2 (257,000)	2.02 (6.63)	0.15 (0.49)

TABLE 3.2-3 CALCULATED MAXIMUM TIME-TEMPERATURE REGIMES OF EXPOSURE DURING TRANSIT THROUGH THE BOWLINE POINT PLANT UNIT 2 COOLING-WATER SYSTEM

Number of Pumps Operating	System Section	Transit Time τ (min)	ΔT (C)	$\int_0^\tau \Delta T\, dt$ (C-min)
3	Intake - condenser feed	2.6	0.0	--
	Condenser feed - effluence	5.4	8.3	44.8
2	Intake - condenser feed	3.1	0.0	--
	Condenser feed - effluence	6.5	9.8	63.7
1	Intake - condenser feed	5.4	0.0	--
	Condenser feed - effluence	11.2	16.8	188.2
2 (throttled)	Intake - condenser feed	3.9	0.0	--
	Condenser feed - effluence	8.1	12.1	98.0

TABLE 3.2-4 CIRCULATING WATER FLOW (10^6 gpd) AND ΔT (F) DATA FOR UNIT 1 AT THE BOWLINE POINT PLANT, 1976

	JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC	
Day	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT
1	370	7	Offline		Offline		370	13	370	11	370	15	455	18	Offline		Offline		455	12	370	17	370	--
2	370	12	Offline		Offline		370	15	370	16	370	19	455	13	Offline		Offline		178	0	370	17	370	--
3	309	0	Offline		Offline		370	11	370	13	370	16	455	14	Offline		Offline		152	7	370	15	370	--
4	79	0	Offline		Offline		370	14	370	13	370	11	455	9	Offline		Offline		455	5	370	19	370	0
5	Offline		Offline		Offline		370	16	370	14	370	10	455	8	Offline		Offline		455	14	370	8	370	0
6	Offline		Offline		Offline		370	13	370	14	370	7	455	13	Offline		Offline		455	13	370	9	370	19
7	Offline		Offline		Offline		370	14	370	15	370	15	455	17	Offline		Offline		455	14	370	10	370	--
8	Offline		Offline		Offline		370	14	370	12	370	15	455	15	Offline		Offline		455	16	370	19	370	0
9	Offline		Offline		Offline		370	14	370	7	370	12	455	15	Offline		Offline		455	12	370	20	370	--
10	Offline		Offline		Offline		370	13	370	14	370	--	455	10	Offline		Offline		455	8	370	21	370	--
11	Offline		Offline		Offline		370	15	370	14	370	15	455	6	Offline		Offline		455	13	370	21	370	17
12	Offline		Offline		Offline		370	18	370	14	370	15	455	10	Offline		Offline		455	15	370	22	370	15
13	Offline		Offline		Offline		370	15	370	15	370	7	455	8	Offline		Offline		455	20	370	21	370	17
14	Offline		Offline		Offline		370	15	170	15	370	15	455	10	Offline		Offline		455	19	370	15	370	21
15	Offline		Offline		Offline		370	15	370	15	370	15	455	11	Offline		Offline		428	16	370	21	370	19
16	Offline		Offline		Offline		370	--	370	11	370	17	455	10	Offline		Offline		370	10	370	21	370	20
17	Offline		Offline		Offline		370	--	370	15	370	17	Offline		Offline		Offline		370	10	370	22	370	19
18	Offline		Offline		Offline		370	--	370	14	370	17	Offline		Offline		Offline		370	17	370	22	370	14
19	Offline		Offline		Offline		370	--	370	15	370	18	455	11	Offline		Offline		370	17	370	21	370	15
20	Offline		Offline		Offline		370	15	370	15	370	16	455	5	Offline		Offline		370	15	370	20	370	18
21	Offline		Offline		Offline		370	13	370	16	370	15	455	0	Offline		455	--	370	21	370	22	370	20
22	Offline		Offline		Offline		370	16	370	11	404	16	455	0	Offline		455	15	370	17	370	22	370	18
23	Offline		Offline		Offline		370	15	370	7	455	19	455	0	Offline		455	13	370	14	370	21	370	16
24	Offline		Offline		Offline		370	16	370	14	455	18	455	0	Offline		455	10	370	14	370	22	370	15
25	Offline		Offline		297	--	370	16	370	18	455	17	455	0	Offline		Offline		370	17	370	18	370	8
26	Offline		Offline		455	--	370	15	370	17	455	17	455	0	Offline		Offline		370	17	370	9	370	9
27	Offline		Offline		370	--	370	15	370	12	455	17	455	0	Offline		455	13	370	17	370	20	370	17
28	Offline		Offline		370	0	370	17	370	15	455	18	455	0	Offline		455	14	370	17	370	--	370	20
29	Offline		Offline		370	2	370	16	370	10	455	17	455	0	Offline		455	--	370	17	370	--	370	19
30	Offline				370	5	370	17	370	10	455	12	455	0	Offline		455	--	370	16	370	--	370	19
31	Offline				370	9			370	12			455	0	Offline				370	18			370	17

TABLE 3.2-5 CIRCULATING WATER FLOW (10^6 gpd) AND ΔT (F) DATA FOR UNIT 2 AT THE BOWLINE POINT PLANT, 1976

	JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC	
Day	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT	Flow	ΔT
1	370	3	370	3	370	11	370	13	370	10	370	14	455	0	455	9	455	11	Offline		Offline		Offline	
2	370	7	370	9	370	10	370	15	370	5	370	6	455	0	455	11	455	11	Offline		Offline		Offline	
3	370	8	370	9	370	11	370	9	370	11	370	9	455	0	455	9	455	12	Offline		Offline		Offline	
4	370	7	370	9	370	11	370	11	370	11	370	15	455	0	455	10	455	7	Offline		Offline		Offline	
5	370	7	370	--	370	11	370	12	370	12	370	6	455	0	455	11	455	6	Offline		Offline		Offline	
6	370	7	370	11	370	11	370	13	370	12	370	4	455	11	455	11	455	5	Offline		Offline		Offline	
7	370	9	370	10	370	2	370	13	370	12	370	13	455	12	455	11	455	12	Offline		Offline		Offline	
8	370	0	370	--	370	9	370	15	370	10	370	--	509	10	455	11	455	11	Offline		Offline		Offline	
9	370	9	370	--	370	8	370	14	370	5	370	--	455	11	455	12	455	12	Offline		Offline		Offline	
10	370	9	370	9	370	11	370	15	370	12	370	13	455	3	455	11	455	14	Offline		Offline		370	12
11	370	3	370	10	370	12	370	15	370	12	370	12	455	5	455	10	455	14	Offline		Offline		370	12
12	370	7	370	10	370	12	370	18	370	12	370	13	455	16	455	12	455	8	Offline		Offline		370	8
13	370	9	370	10	370	12	370	15	370	12	370	10	370	--	455	14	455	12	Offline		Offline		370	11
14	370	6	370	10	370	--	370	15	370	12	370	11	455	9	455	14	455	11	Offline		Offline		370	14
15	370	8	370	7	370	11	370	13	370	11	370	12	455	8	455	8	455	11	Offline		Offline		370	12
16	370	8	370	10	370	12	105	13	370	--	370	10	455	13	455	10	Offline		Offline		Offline		370	12
17	370	8	370	13	370	10	370	15	370	--	455	0	455	7	455	12	Offline		Offline		Offline		370	13
18	370	4	370	11	370	12	370	14	370	7	123	0	370	6	455	11	455	12	Offline		Offline		370	--
19	370	10	370	11	370	12	370	12	370	15	367	0	455	12	455	11	455	11	Offline		Offline		370	14
20	370	9	370	9	370	13	370	15	370	--	455	0	455	14	455	11	455	12	Offline		Offline		370	13
21	370	9	370	9	370	10	370	14	370	15	455	0	455	11	455	11	455	14	Offline		Offline		370	13
22	370	9	238	--	370	13	370	16	370	--	341	0	455	15	455	12	455	11	Offline		Offline		370	13
23	370	10	370	--	370	12	370	15	370	--	81	0	455	14	455	13	455	11	Offline		Offline		370	10
24	370	6	370	10	370	12	370	16	370	18	455	0	455	15	455	14	455	10	Offline		432	0	370	9
25	370	8	370	11	370	12	370	16	370	16	455	0	455	15	455	13	455	11	Offline		455	0	370	4
26	370	10	370	11	370	--	370	15	370	13	455	0	455	11	455	15	455	9	Offline		455	0	370	4
27	370	10	370	11	370	11	370	16	370	9	455	0	455	9	455	14	455	10	Offline		455	0	370	9
28	370	12	370	11	370	10	370	17	370	12	455	0	455	--	455	14	455	11	Offline		455	0	370	13
29	370	10	370	7	370	10	370	15	370	7	455	0	455	12	455	11	455	--	Offline		455	0	370	12
30	370	--			370	11	370	15	370	4	455	0	455	11	455	11	455	--	Offline		455	0	370	13
31	370	5			370	12			370	9			455	6	455	11			Offline				370	11

CHAPTER 4: ENTRAINMENT SURVIVAL

4.1 ICHTHYOPLANKTON

4.1.1 Introduction

Among the organisms that are small enough to pass through the 9.5-mm bar-mesh opening of the intake screens of the Bowline Point Generating Station are the eggs, larvae, and juveniles of fish (ichthyoplankton) of the Hudson River. These early life stages of fish are exposed to abrupt changes in velocity, temperature, pressure, and mechanical buffeting during passage through the plant's condenser cooling system.

The objective of the studies described below was to determine survival rates for ichthyoplankton that passed through the condenser cooling system of the Bowline Point plant. Survival was determined initially and through latent observations made through 96 hours after collecting ichthyoplankton at both the intake and discharge sampling stations. Entrainment effects were assessed through the comparison of the survival of organisms collected from the discharge canal with the survival of those collected at the intake station, which served as controls.

These studies focused on white perch (*Morone americana*), striped bass (*Morone saxatilis*), herrings (family Clupeidae), the Atlantic tomcod (*Microgadus tomcod*), and the bay anchovy (*Anchoa mitchilli*). Larvae of other species, however, were collected in the samples as well, and were also observed for latent survival. Other species included members of the families Cyprinidae and Centrarchidae; the tessellated darter (*Etheostoma olmstedi*), and the rainbow smelt (*Osmerus mordax*).

Effects upon the survival of experimental and control organisms due to sampling and holding were determined in a series of special experiments that were conducted in April and May 1976 prior to the spawning season of striped bass and white perch. The results of these experiments were used to modify the sampling regime in the subsequent season so that sampling mortality was kept to a minimum. Details of these studies are presented in Appendix A.

4.1.2 Methods

Ichthyoplankton entrainment survival sampling was performed at the intake and discharge of the Bowline Point plant. Samples were collected near the bottom at the intake in front of the Unit 1 trash racks. At the discharge, samples were collected from standpipes at Unit 1 or Unit 2.

Samples were collected at the Bowline Point plant during the peak of the spawning season for Atlantic tomcod, clupeids, striped bass, white perch, and bay anchovy. Samples were taken four nights per week. An average of 10 samples per station per night were collected. Discharge samples were collected at the Unit 2 discharge except during the period from 21 June to 30 June, when sampling was switched to the Unit 1 discharge because of an unscheduled outage of Unit 2.

Samples were pumped into a larval collection table* at the intake and discharge stations using a 4-in. diameter Midwhirl trash pump (Figure 4.1-1). The duration of each collection was 15 minutes, resulting in a mean sample

* Originally designed by Lawler, Matusky & Skelly Engineers (LMS), subsequently modified by Ecological Analysts, Inc.

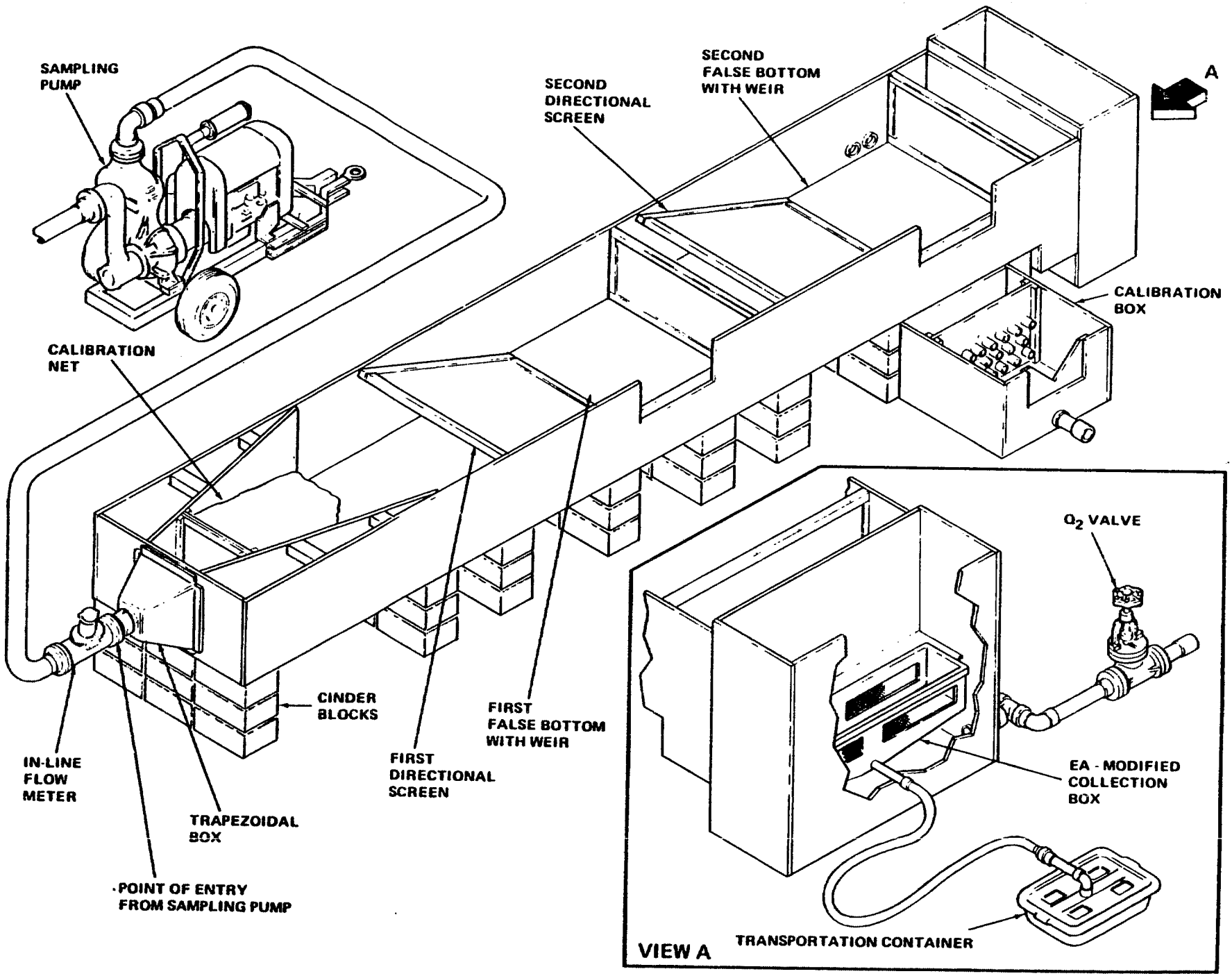


Figure 4.1-1. Design of the larval collection tables used in the Bowline Point entrainment survival studies beginning in May 1976.

volume of about 10 m^3. Samples of ichthyoplankton collected in the table were drained into a detachable container which also served as a sorting tray.

The tables were thoroughly washed between collections to remove any remaining detritus or organisms. Table washes were collected and preserved for subsequent examination.

Intake and discharge samples were sorted simultaneously in an onsite laboratory. Larval and juvenile fish were classified as live, stunned, or dead, based upon the following criteria:

Live:	swimming vigorously, no orientation problems
Stunned:	swimming erratically, struggling, swimming on side
Dead:	no vital life signs; no body or opercular movement, no response to gentle probing.

Partial organisms were handled in the following manner: if 50 percent or more of the organism was present, that organism was included in the initial dead count; fragments representing less than 50 percent of an organism were not included in the analysis, since it could not be conclusively determined in all cases that less than 50 percent of an organism represented the collection of a distinctly separate organism. (The smaller fragment could have been part of a larger segment already counted as a distinct organism, and piecing fragments together in most cases would have been neither informative nor appropriate to the analysis.) Live and stunned fish were carefully transferred to separate holding containers with a large-bore glass pipette.

Care was exercised to separate the very young larvae from the older larvae and juveniles to reduce the possibility of cannibalism. A maximum of five

larvae were placed in each container, which was aerated and maintained in an ambient water trough. Dead specimens were preserved for later identification.

Live and stunned organisms from the initial sort were examined at 3, 6, 12, 24, 48, 72, and 96 hours after sample collection. Any dead organisms were removed from the holding jars and preserved in vials. All organisms remaining alive after 96 hours were also preserved. Species and life-stage determinations were facilitated by reference to the available literature and to a reference collection. Length measurements were performed on members of the Morone species.

Quality control procedures in the laboratory consisted of a color-coded labeling system for jars and vials, records of the number of live and dead at each check time, and immediate checks of the sorted sample. The efficiency of sorting and the accuracy and consistency of species/life stage identifications were also determined and documented. Quality and consistency of the survival studies were also assured by strict adherence to standard operating procedures. The general scheme for determining ichthyoplankton survival is presented in Figure 4.1-2.

4.1.3 Results and Discussion

The total number of organisms collected for survival analysis in 1976 is shown by species and life stage in Table 4.1-1. For convenience, a list of the common and scientific names of the species has been included (Table 4.1-2). Striped bass, white perch, Atlantic tomcod, bay anchovy, and the herrings were the most abundant species. Post-yolk-sac larvae were caught

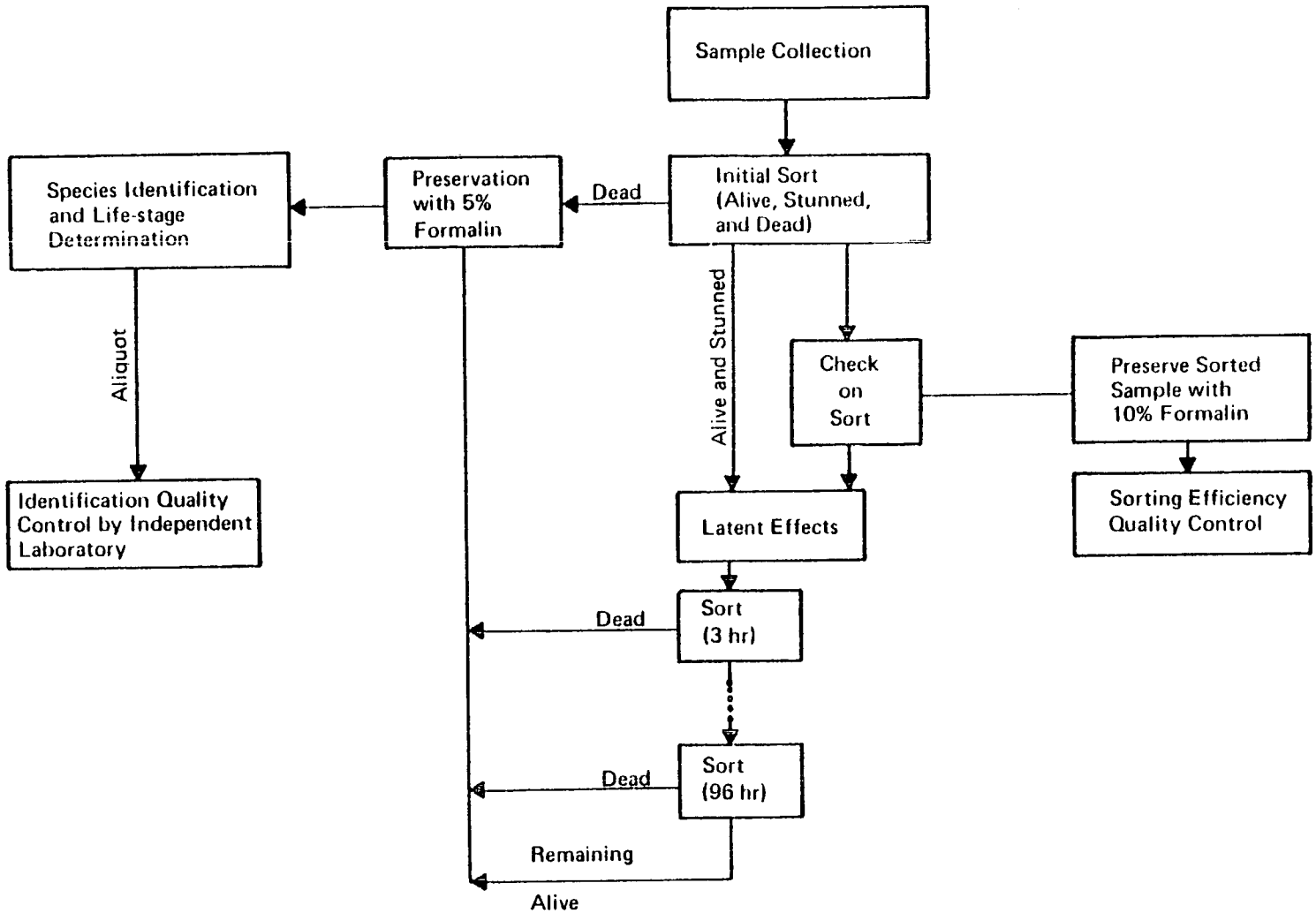


Figure 4.1-2. Work flow diagram of ichthyoplankton survival determination.

TABLE 4.1-1 TOTAL NUMBER OF EACH TAXON AND LIFE STAGE COLLECTED FOR SURVIVAL DETERMINATIONS AT THE BOWLINE POINT PLANT, 1976

Taxon	Intake			Discharge			Total		
	Larvae			Larvae			Larvae		
	Yolk-sac	Post-yolk-sac	Juvenile	Yolk-sac	Post-yolk-sac	Juvenile	Yolk-sac	Post-yolk-sac	Juvenile
Striped bass	10	118	13	2	209	42	12	327	55
White perch	0	54	7	1	42	8	1	96	15
Atlantic tomcod	280	54	2	143	17	0	423	71	2
Bay anchovy	1	148	30	17	1,120	273	18	1,268	303
Clupeids	0	46	9	0	83	4	0	129	13
American eel	0	0	4	0	0	1	0	0	5
Rainbow smelt	0	0	2	0	0	13	0	0	15
Cyprinids	0	1	0	1	4	2	1	5	2
Cyprinodontids	0	0	0	0	4	0	0	4	0
Centrarchids	0	3	1	0	13	3	0	16	4
Tesselated darter	0	4	3	0	0	2	0	4	5
Weakfish	0	0	0	0	1	0	0	1	0

TABLE 4.1-2 COMMON AND SCIENTIFIC NAMES FOR FISH SPECIES OBTAINED IN ENTRAINMENT VIABILITY COLLECTIONS

Species	Common Name
Anguilla rostrata	American eel
Clupeidae	Herrings
Anchoa mitchilli	Bay anchovy
Osmerus mordax	Rainbow smelt
Cyprinidae	Minnows
Microgadus tomcod	Atlantic tomcod
Fundulus spp.	Killifishes
Morone americana	White perch
M. saxatilis	Striped bass
Centrarchidae	Sunfishes
Etheostoma olmstedi	Tessellated darter
Cynoscion regalis	Weakfish
Cyprinodontidae	Killifishes

in larger numbers than the other life stages for all species except Atlantic tomcod, which were primarily in the yolk-sac stage.

The seasonal distribution of the five major species collected during survival sampling is shown in Figure 4.1-3. Most of the Atlantic tomcod, which spawn in the Hudson River during winter months, were collected in a single week in mid-March when ambient water temperature was approximately 4-5 C. Members of the clupeid family spawn primarily in freshwater to the north of the Bowline Point site. Larvae were, however, collected during the 1976 survival studies in low numbers from late May to mid-July.

Striped bass usually spawn from early May to early June in the Hudson when water temperatures exceed 10-11 C, and peak abundances of larvae have been observed in the Indian Point and Bowline Point area in late May and early June (NYU 1974; LMS 1975; Ecological Analysts 1976). In 1976, peak abundances of striped bass larvae at Bowline Point occurred somewhat later in the year (mid-June to mid-July). Water temperatures during this period ranged from about 21 to 26 C. Juvenile striped bass did not appear in survival collections until 12 July. White perch larvae were collected concurrently with the striped bass, the highest numbers of these larvae being taken between 26 June and 1 July at an ambient water temperature of 25 C.

Bay anchovy spawn throughout the summer months in saltwater portions of the estuary. Most of the bay anchovy were collected for survival studies during the last week in July, about 2 weeks later than the peak period for this species in 1975.

Length frequency distribution for Morone collected during survival sampling is presented in Table 4.1-3. The mean length of striped bass collected in

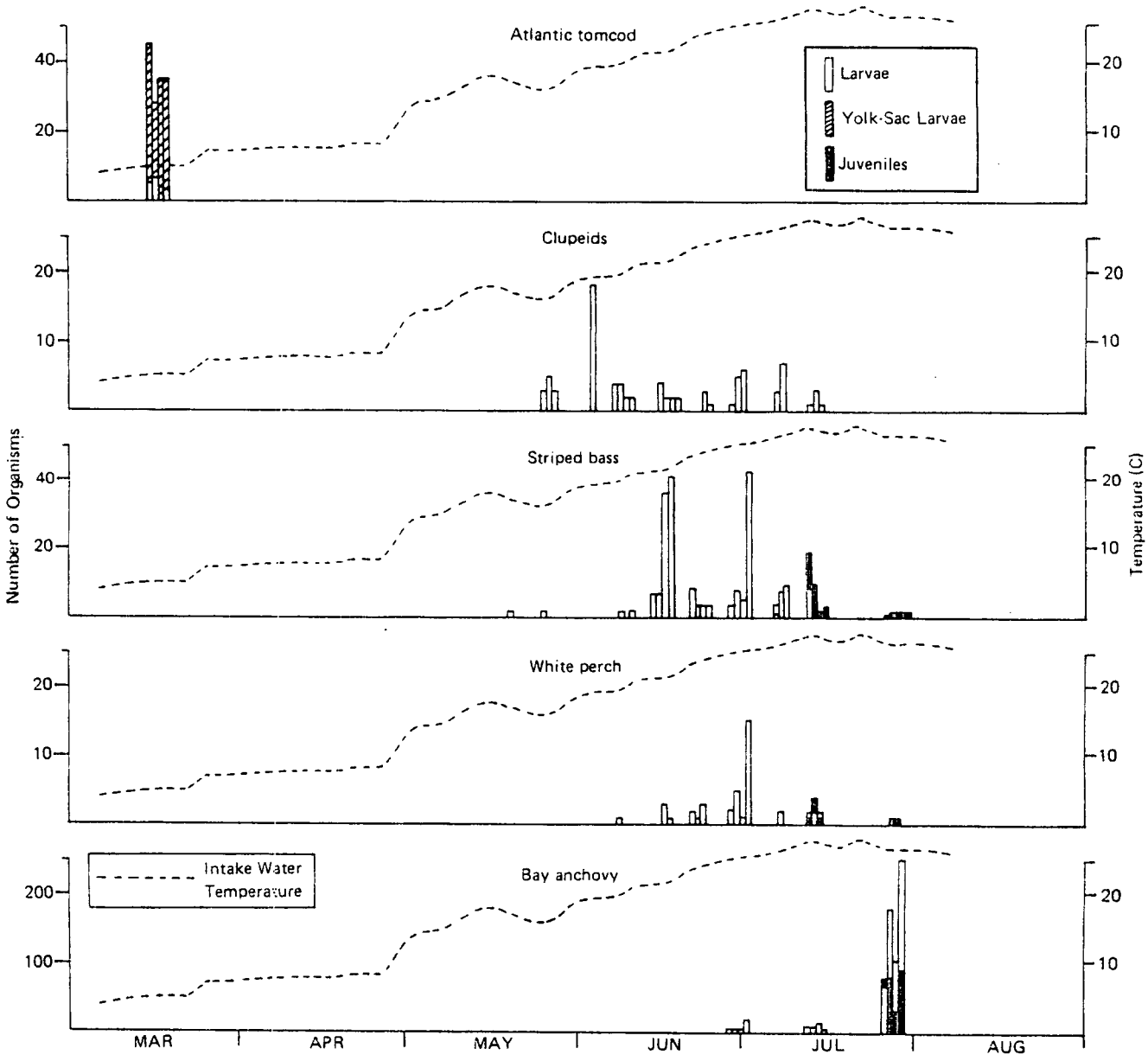


Figure 4.1-3. Seasonal distribution of ichthyoplankton collected for survival study at the Bowline Point plant circulating water discharge, 1976.

TABLE 4.1-3 LENGTH-FREQUENCIES BY SAMPLING WEEK FOR STRIPED BASS AND WHITE PERCH COLLECTED DURING SURVIVAL STUDIES AT THE INTAKE (I) AND DISCHARGE (D) OF THE BOWLINE POINT PLANT, 1976

Week	Station	n	X	SE	Length Intervals (mm) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Range Max
Striped Bass															
18 MAY	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	3	4.67	0.67	0	2	1	0	0	0	0	0	0	4.0	6.0
24 MAY	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	1	6.00	0.00	0	0	1	0	0	0	0	0	0	6.0	6.0
2 JUN	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	0	--	--	--	--	--	--	--	--	--	--	--	--	--
7 JUN	I	6	7.00	0.63	0	0	5	1	0	0	0	0	0	6.0	10.0
	D	6	6.17	0.40	0	1	5	0	0	0	0	0	0	5.0	8.0
14 JUN	I	80	6.43	0.38	0	16	64	0	0	0	0	0	0	4.0	8.0
	D	99	5.97	0.07	0	23	76	0	0	0	0	0	0	4.0	8.0
21 JUN	I	32	7.19	0.26	0	1	24	7	0	0	0	0	0	5.0	11.0
	D	21	6.81	0.37	0	3	15	2	1	0	0	0	0	4.0	12.0
28 JUN	I	29	11.03	0.52	0	0	6	14	5	3	1	0	0	5.0	18.0
	D	69	14.09	1.80	0	0	9	17	26	11	5	1	0	6.0	21.0
6 JUL	I	10	19.00	1.52	0	0	0	1	1	2	2	3	1	11.0	27.0
	D	22	15.55	0.90	0	0	1	2	7	2	8	2	0	7.0	22.0
12 JUL	I	11	25.27	1.24	0	0	0	0	0	1	0	3	7	17.0	30.0
	D	44	22.25	0.67	0	0	0	2	2	1	6	13	18	11.0	34.0
26 JUL	I	4	29.75	2.59	0	0	0	0	0	0	0	1	3	22.0	33.0
	D	6	36.00	1.32	0	0	0	0	0	0	0	0	6	30.0	39.0
White Perch															
18 MAY	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	0	--	--	--	--	--	--	--	--	--	--	--	--	--
24 MAY	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	1	4.00	0.00	0	1	0	0	0	0	0	0	0	4.0	4.0
2 JUN	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	0	--	--	--	--	--	--	--	--	--	--	--	--	--
7 JUN	I	0	--	--	--	--	--	--	--	--	--	--	--	--	--
	D	1	7.00	0.00	0	0	1	0	0	0	0	0	0	7.0	7.0
14 JUN	I	5	5.20	0.86	0	3	2	0	0	0	0	0	0	3.0	8.0
	D	6	3.83	0.40	0	6	0	0	0	0	0	0	0	3.0	5.0
21 JUN	I	4	4.75	0.25	0	4	0	0	0	0	0	0	0	4.0	5.0
	D	9	5.89	0.72	0	5	3	1	0	0	0	0	0	3.0	10.0
28 JUN	I	38	9.45	0.45	0	5	7	18	7	1	0	0	0	3.0	16.0
	D	29	7.97	0.62	0	10	5	9	5	0	0	0	0	3.0	14.0
6 JUL	I	4	12.75	1.31	0	0	0	2	0	2	0	0	0	10.0	15.0
	D	2	10.00	1.00	0	0	0	2	0	0	0	0	0	9.0	11.0
12 JUL	I	6	18.50	1.88	0	0	0	1	0	1	2	2	0	11.0	23.0
	D	11	16.18	1.22	0	0	0	0	6	2	1	1	1	12.0	25.0
26 JUL	I	4	29.75	2.59	0	0	0	0	0	0	0	1	3	22.0	33.0
	D	2	31.50	0.50	0	0	0	0	0	0	0	0	2	31.0	32.0

Note: n = number of lengths.
X = mean length.
SD = Standard error of the mean.

the intake samples exceeded that of those collected in the discharge samples by approximately 2 mm on five out of seven sampling dates. The mean length of striped bass collected at the discharge exceeded that of those collected at the intake on two dates (28 June and 26 July). White perch larvae showed a similar trend. Intake collections exhibited a mean length approximately 2 mm greater than white perch collected at the discharge on four out of six sampling dates. The length of white perch collected at the discharge was greater than that of those collected at the intake on 21 June and 26 July.

The mean length of striped bass collected at the intake and discharge was 15.1 and 15.3 mm, respectively, for the seven dates where both stations collected at least one specimen (7 June - 26 July). The average length of white perch collected at the intake was 13.4 mm and at the discharge was 12.6 mm for those dates where at least one specimen was collected at both stations (14 June - 26 July).

4.1.3.1 Intake and Discharge Survival

The mean initial and 96-hour survival of each species collected at the Bowline Point plant during 1976 is shown in Table 4.1-4. Survival proportion was determined by the number of individuals classified as alive and stunned divided by the total number of individuals collected. Live organisms were grouped with stunned organisms in the analysis to avoid potential bias associated with the subjective stunned categorization. Many (10-15 percent) of the larvae classified as stunned survived through the entire latent effects observation period (Ecological Analysts 1976), and the alternative approach of including them in the dead category would be inappropriate. Survival of ichthyoplankton in the intake station samples is consistent with that measured in the 1975 survival studies (Ecological Analysts 1976). Initial survival of striped

TABLE 4.1-4 MEAN INITIAL AND 96-HOUR SURVIVAL OF EACH TAXON AND LIFE STAGE AT THE BOWLINE POINT PLANT INTAKE (I) AND DISCHARGE (D), 1976

Species	Station	Yolk-sac Larvae			Post-Yolk-sac Larvae			Juveniles		
		No. of Fish	Proportion Alive[a] Initial	96-hr	No. of Fish	Proportion Alive Initial	96-hr	No. of Fish	Proportion Alive Initial	96-hr
Striped bass	I	10	0.90±0.19*	0.00	118	0.81±0.07	0.40±0.09	13	1.00	0.85±0.19
	D	2	0.00	0.00	209	0.54±0.07	0.23±0.06	42	0.93±0.08	0.55±0.15
White perch	I	0	--	--	54	0.62±0.13	0.24±0.11	7	1.00	0.85±0.26
	D	1	0.00	0.00	42	0.33±0.14	0.21±0.12	8	0.92±0.19	0.58±0.34
Atlantic tomcod	I	280	0.82±0.05	0.54±0.06	54	0.54±0.13	0.09±0.08	2	1.00	0.50±0.69
	D	143	0.94±0.04	0.81±0.06	17	0.29±0.22	0.12±0.15	0	--	--
Bay anchovy	I	1	0.00	0.00	148	0.07±0.04	0.00	30	0.53±0.18	0.10±0.11
	D	17	0.00	0.00	1,120	0.00	0.00	273	0.10±0.04	0.00
Herrings	I	0	--	--	46	0.35±0.14	0.00	9	0.89±0.20	0.00
	D	0	--	--	83	0.20±0.09	0.01±0.02	4	0.00	0.00
American eel	I	0	--	--	0	--	--	4	1.00	1.00
	D	0	--	--	0	--	--	1	1.00	1.00
Rainbow smelt	I	0	--	--	0	--	--	2	1.00	0.00
	D	0	--	--	0	--	--	13	0.23±0.23	0.00
Minnows	I	0	--	--	1	0.00	0.00	0	--	--
	D	1	0.00	0.00	4	1.00	1.00	2	1.00	1.00
Killifishes	I	0	--	--	0	--	--	0	--	--
	D	0	--	--	4	1.00	1.00	0	--	--
Sunfishes	I	0	--	--	3	1.00	0.67±0.53	1	1.00	1.00
	D	0	--	--	13	0.69±0.25	0.31±0.25	3	0.67±0.53	0.33±0.53
Tessellated darter	I	0	--	--	4	0.75±0.42	0.50±0.49	3	1.00	0.67±0.53
	D	0	--	--	0	--	--	2	1.00	1.00
Weakfish	I	0	--	--	0	--	--	0	--	--
	D	0	--	--	1	0.00	0.00	0	--	--

(a) All individuals showing signs of life (alive and stunned).

Note: * indicates 95 percent confidence interval.

bass and white perch post-yolk-sac larvae at the plant intake in 1975 was 0.81 and 0.56, respectively, compared with 1976 values of 0.81 and 0.62. Survival of the Morone post-yolk-sac larvae and of bay anchovy juveniles at 96 hours was slightly higher at the intake in 1976 than in 1975 studies. This is possibly indicative of improved collection and handling techniques. Control survival was generally higher for juveniles than for other life stages, with an initial survival at the intake of 100 percent for all species except bay anchovy and the herrings.

Initial survival at the discharge was high for most species and life stages. Survival at 96 hours was high (55-81 percent) for Atlantic tomcod yolk-sac larvae and Morone juveniles. Bay anchovy and clupeid 96-hour survival was low (0-1 percent) at the discharge, and Morone post-yolk-sac survival was intermediate (21-23 percent).

Latent survival at the discharge station was similar to that at the intake (Figures 4.1-4 to 4.1-6). Analysis of latent survival focused on the number of fish that were intially alive after collection. Figures 4.1-4 through 4.1-6 represent the proportion of that number surviving at the indicated times. Survival of Morone post-yolk-sac larvae at both stations decreased rapidly during the first 12 hours following collection, then leveled off and decreased only slightly thereafter. The similarity of the curves for intake and discharge samples indicates that most of the latent mortality results from damage during sample collection, transfer, and holding. Juvenile Morone suffered almost no damage from the sampling process, as indicated by very high latent survival (Figure 4.1-5).

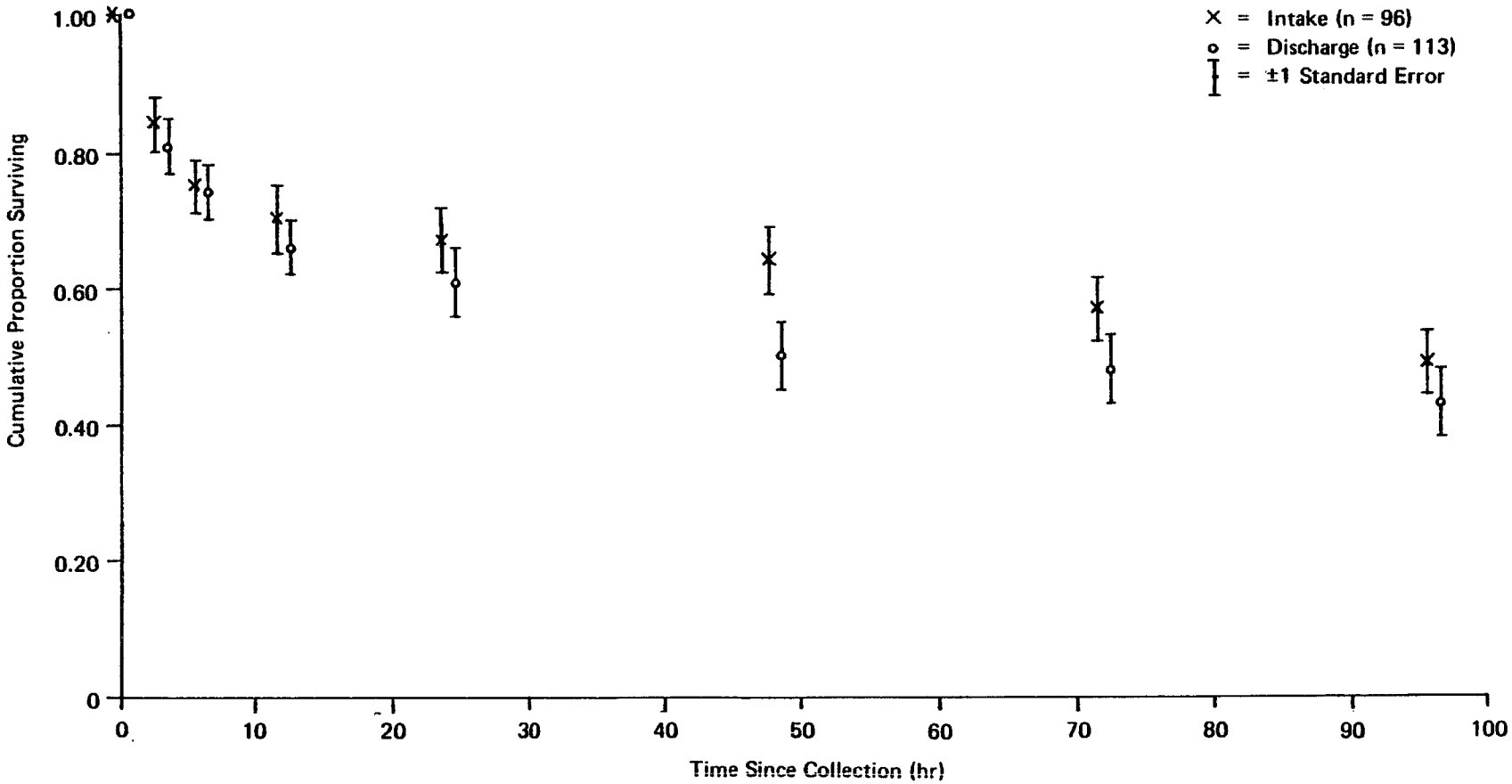


Figure 4.1-4. Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Bowline Point plant, 1976.

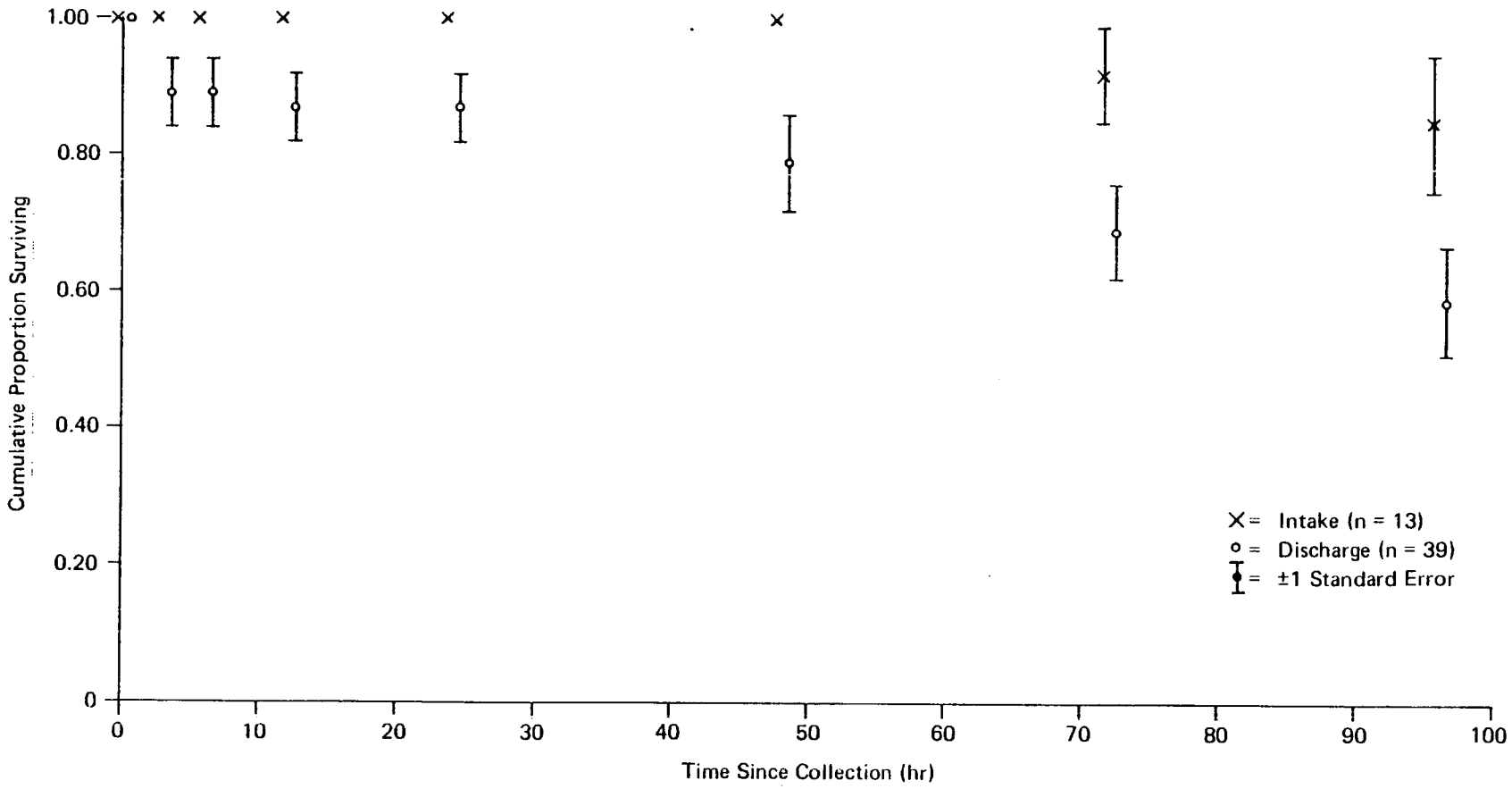


Figure 4.1-5. Latent survival of striped bass juveniles collected at the intake and discharge of the Bowline Point plant, 1976.

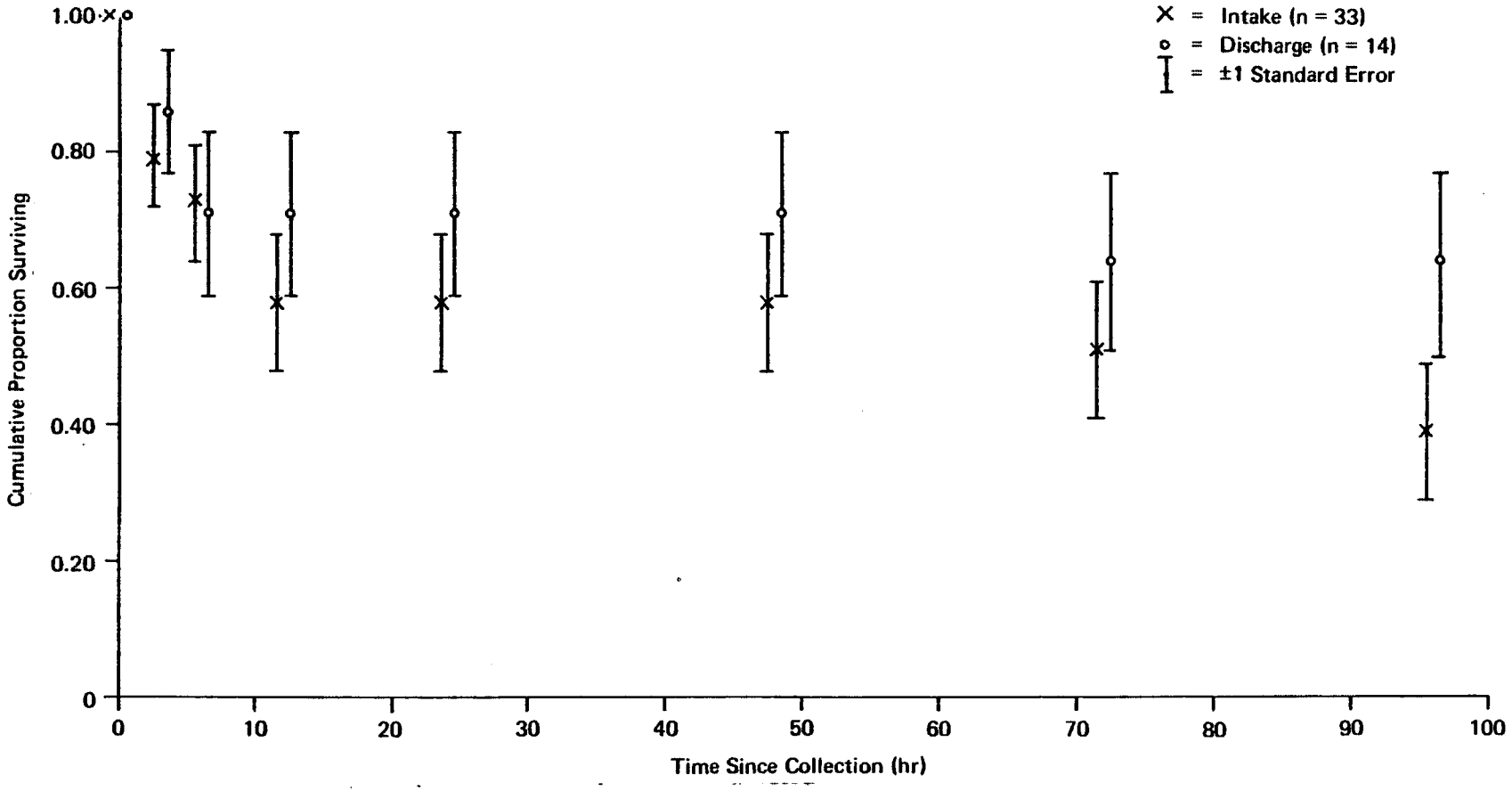


Figure 4.1-6. Latent survival of white perch post-yolk-sac larvae collected at the Bowline Point plant, 1976.

4.1.3.2 Thermal Effect on Survival

Survival of striped bass larvae collected at the plant discharge was lower in 1976 (0.54) than in 1975 (0.74). Similarly, white perch survival at the discharge was 0.33 in 1976 compared with 0.68 in 1975. This apparent anomaly results primarily from differences in thermal exposure of the larvae during the two years. During 1976, 30 percent of the striped bass post-yolk-sac larvae and 45 percent of the white perch collected from the plant discharge had been exposed to temperatures exceeding 30 C. Less than 1 percent of the larvae of each of these species was collected at discharge temperatures exceeding 30 C in the 1975 studies. The difference was caused by lower ambient temperatures and lower thermal loading by the plant during the 1975 entrainment season of Morone.

Survival of the five most abundant species at the Bowline Point discharge is summarized in Table 4.1-5 as a function of exposure temperature. Although the number of organisms is in many cases small, the trend is clear. Survival decreases steadily with increase in discharge water temperature above 30-33 C. This observation is consistent with the results of laboratory studies of fish larvae thermal tolerance (Ecological Analysts 1977a) and with the results of field studies at the Roseton Generating Station (Ecological Analysts 1977b). The laboratory data indicate that thermally induced death of Morone and clupeids begins at exposure temperatures of 31-33 C (10-to-30-minute exposures). Mortality increases rapidly at higher temperatures.

Ecological Analysts is currently studying the thermal tolerance of Atlantic tomcod larvae. Preliminary data indicate that the TL50 for larvae of this species is near 25 C at acclimation temperatures of about 2-4 C. Discharge

TABLE 4.1-5 SURVIVAL OF ICHTHYOPLANKTON AT THE BOWLINE POINT DISCHARGE AS A FUNCTION OF TEMPERATURE EXPOSURE

	Yolk-sac Larvae			Post-yolk-sac Larvae			Juveniles		
Taxa	Temp. (C)	No. of Fish	Ps(a)	Temp. (C)	No. of Fish	Ps	Temp. (C)	No. of Fish	Ps
Striped bass	29.0-29.9	1	0.00	19.0-29.9	146	0.62	29.0-29.9	9	1.00
	30.0-32.9	--	--	30.0-32.9	24	0.54	30.0-32.9	23	0.96
	33.0-35.9	1	0.00	33.0-35.9	39	0.21	33.0-34.9	10	0.80
White perch	29.0-29.9	1	0.00	21.0-29.9	23	0.52	29.0-29.9	5	1.00
	30.0-32.9	--	--	30.0-32.9	7	0.14	30.0-32.9	1	0.00
	33.0-35.9	--	--	33.0-35.9	12	0.08	33.0-35.9	2	1.00
Clupeids	19.0-29.9	--	--	19.0-29.9	58	0.28	29.0-29.9	1	0.00
	30.0-32.9	--	--	30.0-32.9	6	0.17	30.0-32.9	3	0.00
	33.0-35.9	--	--	33.0-35.9	19	0.00	33.0-35.9	--	--
Bay anchovy	24.0-29.9	--	--	24.0-29.9	29	0.03	--	--	--
	30.0-32.9	--	--	30.0-32.9	120	0.00	30.0-32.9	48	0.23
	33.0-35.9	17	0.00	33.0-35.9	971	0.00	33.0-35.9	225	0.07
Atlantic tomcod	9.0-13.9	143	0.94	9.0-13.9	17	0.29	9.0-13.9	--	--

(a) Ps = initial proportion surviving.

Note: Dashes indicate no data available.

temperatures above 20 C would not normally be encountered at the Bowline Point plant during the peak tomcod entrainment season and thermal contributions to entrainment mortality of Atlantic tomcod are therefore not anticipated.

4.1.3.3 Estimates of Entrainment Survival

The effect of the plant on survival of ichthyoplankton was estimated through comparison of intake and discharge results. Intake survival was considered a control because organisms collected in intake samples were not subjected to the plant, although they were subjected to handling and collection as in the discharge collections. Differences between intake and discharge survival were tested for significance. Entrainment survival was calculated as:

$$S\ (\%) = \frac{P_D}{P_I} \times 100$$

where

P_I = proportion surviving at the intake

P_D = proportion surviving at the discharge.

Entrainment survival estimates were made using initial survival data (Table 4.1-6) for larval striped bass, white perch, clupeids, and Atlantic tomcod since latent effects of entrainment for intake and discharge were very similar for the two groups in this and other studies (Ecological Analysts 1976; Lauer et al. 1974). When tested for significance using a one-sided test of the difference in two proportions at the $\alpha = 0.05$ level, latent effects of entrainment were not found to be significant for these groups. However,

TABLE 4.1-6 ESTIMATED ENTRAINMENT SURVIVAL OF ICHTHYOPLANKTON AT THE BOWLINE POINT PLANT, 1976

Taxa	Yolk-sac Larvae		Post-yolk-sac Larvae		Juveniles	
	Temp. (C)	S(%)(a)	Temp. (C)	S(%)	Temp. (C)	S(%)
Striped bass	29.0-29.9	--	19.0-29.9	77	29.0-29.9	89 (NS)
	30.0-32.9	--	30.0-32.9	67	30.0-32.9	90 (NS)
	33.0-35.9	--	33.0-35.9	26	33.0-34.9	70
White perch	29.0-29.9	--	21.0-29.9	84 (NS)	29.0-29.9	100
	30.0-32.9	--	30.0-32.9	23	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	13	33.0-35.9	--
Clupeids	29.0-29.9	--	19.0-29.9	80 (NS)	29.0-29.9	--
	30.0-32.9	--	30.0-32.9	49 (NS)	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	0	32.9-35.9	--
Bay anchovy	29.0-29.9	--	24.0-29.9	NE	24.0-29.9	--
	30.0-32.9	--	30.0-32.9	NE	30.0-32.9	NE
	33.0-35.9	--	33.0-35.9	NE	33.0-35.9	NE
Atlantic tomcod	9.0-13.9	100 (NS)	9.0-13.9	54	9.0-13.9	--

(a) S = Entrainment survival based on initial survival at intake and discharge.

Note: Dashes indicate sample size at intake or discharge <5.
NS indicates survival at the discharge not significantly lower than that at the intake for a one-tailed t-test at the $\alpha = 0.05$ level:

$$Z = \frac{P_I - P_D}{\left[\frac{P_I(1 - P_I)}{n_I} + \frac{P_D(1 - P_D)}{n_D}\right]^{1/2}}$$

NE indicates that no estimate of entrainment survival was made for reasons described in the text.

latent survival of striped bass juveniles was significantly lower at the discharge than at the intake station. Survival at 24 hours following collection was selected as the best estimate of the total effect of entrainment on striped bass juveniles on the basis of subjective analysis of the shapes of the latent survival curves (Figure 4.1-5). The discharge survival curve appeared to level at 24 hours, presumably indicating that the effects of entrainment were fully accounted for by this time. The 24-hour data were used in the calculation of entrainment survival for juveniles. Estimates of entrainment survival were not made for bay anchovy larvae and juveniles since latent effects appeared to be significant but were not easily quantified due to the rapid die-off of all organisms at both intake and discharge.

The 1976 data for bay anchovy juveniles suggest, however, that entrainment mortality is probably high for this species.

Survival is generally high at discharge temperatures below the upper thermal tolerance limits of the organisms. Striped bass post-yolk-sac larvae survival was 77 percent at discharge temperatures below 30 C, but decreased to 26 percent at exposure temperatures between 33 and 36 C. No significant difference was found between intake and discharge survival at low exposure temperatures for white perch or clupeid post-yolk-sac larvae. Survival of these species was, however, very low (0-13 percent) at discharge temperatures above 33 C.

Results for the Morone spp. support those obtained in 1975. Entrainment survival of striped bass larvae estimated from the 1975 sampling was 91 percent. More than 95 percent of these larvae were exposed to discharge temperatures below 28 C. No significant difference between intake and discharge survival was found for white perch larvae in 1975.

The data collected at the Bowline Point plant indicate that thermal exposure (time-temperature) is the primary factor influencing survival of entrained fish larvae. Mechanical damage from entrainment appears to be of minor importance under normal plant operating conditions, and may account for approximately 0-22 percent mortality of post-yolk-sac larvae of striped bass and white perch. The dramatic decrease in larval survival at exposure temperatures exceeding critical tolerance limits demonstrates the need for careful consideration of the exposure conditions occurring, or those likely to occur, in power plant circulating water systems for proper interpretation and prediction of entrainment impact.

REFERENCES: SECTION 4.1

Ecological Analysts, Inc. 1977a. Hudson River Thermal Effects Studies for Representative Important Species. Volume 1. Second Progress Report to Central Hudson Gas & Electric Corporation.

Ecological Analysts, Inc. 1977b. Roseton Generating Station Entrainment and Impingement Survival Studies. 1975 Annual Interpretive Report.

Ecological Analysts, Inc. 1976. Bowline Point Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretative Report.

Lauer, G. J., W. T. Waller, D. W. Bath, W. Meeks, R. Heffner, T. Ginn, L. Zubarick, P. Bibko and P. C. Storm. 1974. Entrainment studies on Hudson River organisms. Proc. Sec. Entrain. Intake Screen. Workshop (L. D. Jensen, ed.). The Johns Hopkins Univ. Cool. Wat. Res. Proj. Rep. No. 15. 374 p.

4.2 ZOOPLANKTON

4.2.1 Introduction

Studies were conducted at the Bowline Point Generating Station during 1976 to determine the survival of zooplankton entrained by the plant circulating water system. This work was a continuation of experimental studies on zooplankton survival begun in 1975.

Survival of zooplankton was determined in samples collected from the intake and discharge of the condenser cooling-water system. The intake samples served as a control on the contribution of the sampling process to the mortality observed at the discharge station. Survival was determined immediately following collection and at several time intervals up to 96 hours thereafter.

Zooplankton was divided into two basic groups for study: macrozooplankton and microzooplankton. The differences in size range and abundance of the two groups required slightly different procedures for studying their survival. Macrozooplankton studies emphasized Gammarus spp., Monoculodes spp., Neomysis spp., and Corophium spp. Microzooplankton studies emphasized selected species of copepods, rotifers, cladocerans, and molluscan larvae.

Samples were collected seasonally in 1975 and semimonthly in 1976 to provide comprehensive coverage of seasonal variations in species composition and ambient physical-chemical conditions.

4.2.2 Macrozooplankton

4.2.2.1 Methods

4.2.2.1.1 Collection Methods

In order to determine the involvement and survival of macrozooplankton in the Bowline Point plant once-through cooling system, samples were collected from both the intake and discharge of the plant. Sample collection usually occurred after sunset, coinciding with high densities of organisms. Samples were collected by pumping known volumes of water into larval collection tables at a rate of 500-800 liters/minute. Sampling duration was either 15 or 30 minutes depending on the densities of organisms. The time of sampling and the respective water temperatures were recorded for each sample in 1975. In addition, pH, conductivity, and dissolved oxygen were recorded in 1976.

4.2.2.1.2 Experimental Methods

Samples were returned to the onsite laboratory for sorting and enumeration. The criteria for the evaluation of the physiological condition of the organisms are as follows:

Live - Animal shows normal behavior unique to the species.

Dead - Animal shows no vital life signs or response to a stimulus (cessation of pleopod beating indicates death of Gammarus spp.)

Stunned - Aberrant swimming behavior or unable to swim (applicable only to Gammarus spp.).

The live and stunned organisms were removed from the sample for incubation within 1.5 hours of collection. Dead organisms were enumerated, removed, and preserved in a 5 percent formalin solution for speciation at a later

time. The remainder of the sample was preserved in a 5 percent formalin solution for sorting, enumeration, and species identification.

Special incubation methods were followed for Gammarus spp., Chaoborus spp., and dipteran larvae. Gammarus spp. were limited to a maximum of 10 organisms per incubation dish to reduce competition and predation. The Gammarus spp. dishes were provided with Tetra Min fish food and cleaned at 24-hour intervals. Chaoborus spp. and other Diptera were incubated with not more than 15 organisms per dish. Each dish was covered to prevent the escape of any emergent adults. Other organisms were incubated when present in sufficient numbers with not more than 10 organisms per dish. All dishes were maintained at river ambient temperature.

Latent effects observations were made at approximately 6, 12, 24, 48, 72, and 96 hours after collection by counting the live, stunned, and dead organisms. During 1976, the 6-hour and 12-hour observations were omitted. The dead organisms were removed and preserved in 5 percent formalin. After the 96-hour observation, all remaining organisms were preserved in 5 percent formalin for later identification.

4.2.2.1.3 Statistical Methods

The analysis of entrainment survival involved the determination of survival at the intake and discharge. When the combined sample sizes in both the intake and discharge samples were 20 or greater, intake and discharge survival was then determined as the proportion of the combined sample size found alive.

Discharge survival was compared statistically with intake survival using the binomial test for differences in proportions (Sokal and Rohlf 1969). The null hypothesis,

$$H_o : p_1 = p_2$$

where

p_1 = proportion surviving in intake sample

p_2 = proportion surviving in discharge sample

is tested using the test statistic

$$t_s = \frac{\sin^{-1}(p_1)^{1/2} - \sin^{-1}(p_2)^{1/2}}{\left[820.8 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)\right]^{1/2}} \qquad (4.2\text{-}1)$$

where n_1 and n_2 are the respective sample sizes, and the constant 820.8 represents the parametric variance of a distribution of arcsine-transformed proportions. This statistic is compared to the critical value $t_{\alpha(n_1+n_2-2)}$ of a one-tailed t-distribution of (n_1+n_2-2) degrees of freedom at a significance level $\alpha = 0.05$. When t_s exceeds $t_{\alpha(n_1+n_2-2)}$, the null hypothesis is rejected, and the alternate hypothesis, $H_1 : p_1 > p_2$, is accepted; i.e., intake survival significantly exceeds discharge survival. When either n_1 or n_2 was less than 20, no statistical comparison was made.

The binomial test for differences in proportions was utilized for comparison of intake and discharge survival initially and at 96 hours. The initial survival proportions were calculated from the total counts of live (including stunned) and dead organisms in the initial samples. The 96-hour proportions, however, were determined from the cumulative number of dead organisms

removed from the cultures and the initial numbers cultured. Thus, in the 96-hour case, sample sizes were generally smaller than in the initial case.

Entrainment mortality estimates were calculated using the equation:

$$\text{Percentage Mortality} = \left(1 - \frac{p_2}{p_1}\right) \times 100 \text{ percent} \qquad (4.2\text{-}2)$$

where the ratio of p_2 to p_1 represents the proportion surviving in the discharge sample corrected for control (intake) mortality. Discharge survival (p_2) represents the combined probability of surviving the entrainment process and the sampling process. Assuming no interaction between the two processes:

$$p_2 = (p_s)(p_e) \qquad (4.2\text{-}3)$$

where

p_s = probability of surviving sampling, and

p_e = probability of surviving entrainment.

Intake survival (p_1) is used as an estimate of p_s. The ratio of p_2 to p_1 then represents the probability of surviving entrainment, since

$$\frac{p_2}{p_1} = \frac{(p_s)(p_e)}{p_s} = p_e \qquad (4.2\text{-}4)$$

The probability of <u>not</u> surviving entrainment (entrainment mortality) is then determined using Equation 4.2-2.

4.2.2.2 Results

4.2.2.2.1 Intake and Discharge Survival

Initial survival of the four major macrozooplankton species at the intake and discharge is shown in Table 4.2-1 for 1975, where results of multiple samples collected over short periods of time were combined to give three distinct seasonal samples. Table 4.2-2 contains 1976 data. Survival data were provided for cases in which intake and discharge sample sizes were 20 or larger for a given species.

Intake and discharge survival was generally high (75-100 percent) for all species over the entire range of thermal exposures. In most cases survival was only slightly lower at the discharge than at the intake.

Entrainment mortality estimates for G. daiberi in 1975 and 1976 are graphically plotted versus discharge temperature in Figure 4.2-1. Also plotted are predicted thermal mortality curves derived from laboratory thermal tolerance studies (see Subsection 4.2.3.3). Entrainment mortality ranged from 0 to 13.8 percent over a wide range of discharge temperatures up to 36 C. No trends in entrainment mortality were apparent over the range of discharge temperatures examined.

In several cases in both 1975 and 1976, discharge survival exceeded intake survival at discharge temperatures from 11 to 37 C, reflecting the experimental variability involved in sampling. This variability is attributed to the small sample sizes tested, natural variability in the entrained populations, and experimental error (the assumption that mortalities due to sampling at the intake and discharge are equivalent may not always hold).

TABLE 4.2-1 EVALUATION OF MACROZOOPLANKTON INITIAL (0-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1975

Taxon	Date	Temperature Range (C)		Percent Survival			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Gammarus daiberi	29 JUL - 5 AUG	27.0-28.5	35.0-37.0	68.7	(96)	74.6	(59)
	29 SEP - 1 OCT	19.5-20.0	23.5-28.5	97.2	(141)	94.4	(72)
	16 DEC - 16 DEC	5.4- 6.0	11.3-11.4	80.4	(102)	92.0	(25)
Monoculodes edwardsi	29 JUL - 5 AUG	27.0-28.5	35.0-37.0	61.7	(175)	76.4	(106)
	29 SEP - 1 OCT	19.5-20.0	23.5-28.5	76.1	(138)	55.4	(121)
	16 DEC - 16 DEC	5.4- 6.0	11.3-11.4	100.0	(23)	95.9	(49)*
Chaoborus punctipennis	29 JUL - 5 AUG	27.0-28.5	35.0-37.0	92.9	(896)	91.8	(549)

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-2 EVALUATION OF MACROZOOPLANKTON INITIAL (0-HOUR) SURVIVAL AT THE BOWLINE POINT PLANT, 1976

Taxon	Date	Temperature (C)		Percent Survival			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Gammarus daiberi	8 MAR	3.2	12.4	97.1	(35)	100.0	(34)
	10 MAY	15.8	25.2	97.6	(128)	92.1	(166)*
	24 MAY	16.5	23.5	90.2	(103)	95.9	(199)
	21 JUN	25.0	32.0	97.6	(217)	84.1	(82)*
	12 JUL	26.0	30.3	99.2	(253)	94.7	(208)*
	26 JUL	24.5	34.0	99.1	(446)	96.2	(106)*
	9 AUG	25.0	32.0	99.0	(715)	94.9	(99)*
	23 AUG	26.0	35.0	98.7	(330)	98.1	(109)
	1 NOV	10.0	20.9	77.2	(22)	95.5	(68)
	15 NOV	7.1	19.6	95.1	(143)	89.3	(131)*
	6 DEC	3.6	16.1	90.0	(20)	83.3	(36)
Monoculodes edwardsi	22 MAR	5.3	8.8	100.0	(103)	96.0	(151)*
	5 APR	9.8	16.8	89.8	(178)	82.8	(35)
	23 AUG	26.0	35.0	96.7	(61)	95.5	(45)
Corophium tuberculatum	15 NOV	7.1	19.6	100.0	(23)	92.0	(50)*
Neomysis americana	26 JUL	24.5	34.0	85.7	(28)	39.3	(33)*
	9 AUG	25.0	32.0	72.5	(40)	67.7	(59)
	13 SEP	23.5	33.0	85.1	(74)	67.2	(55)*
	27 SEP	21.0	29.0	91.8	(37)	88.1	(76)
	4 OCT	18.9	28.3	89.0	(64)	83.3	(102)
Chaoborus punctipennis	12 JUL	26.0	30.3	98.2	(288)	93.8	(180)*
	26 JUL	24.5	34.0	96.0	(75)	96.0	(102)
	9 AUG	25.0	32.0	94.2	(87)	87.5	(32)
	23 AUG	26.0	35.0	97.9	(147)	90.9	(33)

Note: * indicates that discharge survival was significantly lower than intake survival at the $\alpha = 0.05$ level for a one-tailed t-test.

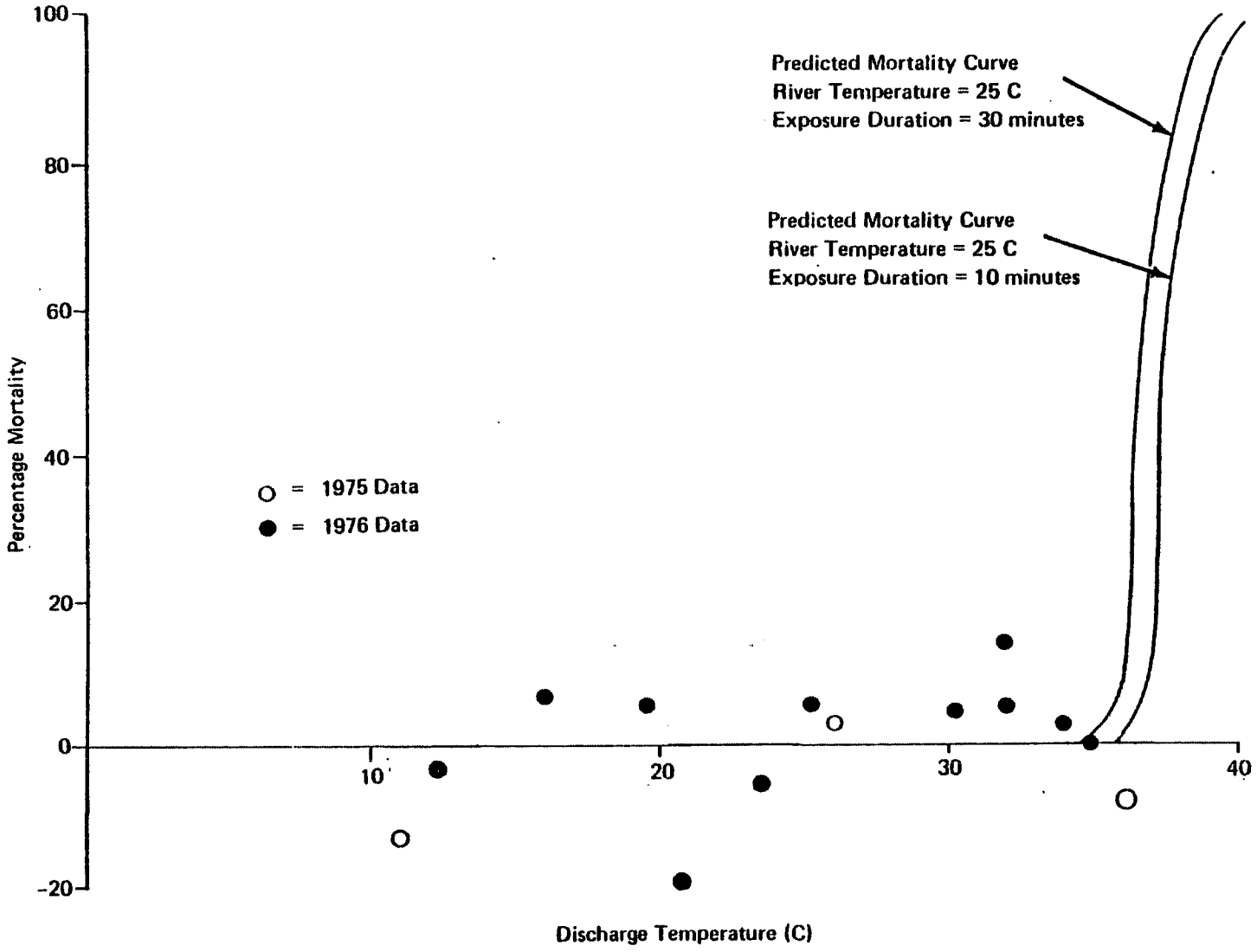


Figure 4.2-1. **Empirical and predicted initial entrainment mortality in relation to discharge temperature for *Gammarus daiberi*. Predicted line from data reported by Ecological Analysts (1977). Empirical data from Roseton plant (1975-76).**

NOTE: Negative mortality calculated as percentage difference between intake and discharge survival relative to discharge survival.

For purposes of illustration, in those cases where discharge survival exceeded intake survival, the differences between intake and discharge survival in relation to discharge survival were calculated, and indicated as negative percentage mortalities in Figure 4.2-1. (Based on this method of calculation, the maximum negative percentage mortality obtainable is 100 percent, and would occur in cases where intake survival was zero and discharge survival was some value greater than zero.) Initial negative mortalities as high as 19 percent were observed for G. daiberi.

Entrainment mortality estimates for C. punctipennis in 1975 and 1976 are graphically plotted versus discharge temperature in Figure 4.2-2. At discharge temperatures up to 36 C, entrainment mortality never exceeded 7.2 percent.

Survival of N. americana at the plant discharge was lower than for all other species in four of the five collections during 1976. Survival of this species was significantly reduced by passage through the plant on two dates when discharge temperatures exceeded 33 C (Figure 4.2-3). At discharge temperatures below 33 C, entrainment mortality estimates never exceeded 6.6 percent.

Initial survival of other species was similar to that of G. daiberi. Discharge survival was always high, never falling below 80 percent.

Latent entrainment survival data for macrozooplankton species for 1975 and 1976 are shown in Tables 4.2-3 and 4.2-4, respectively. Latent mortality estimates for G. daiberi ranged from 0 to 48 percent (Figure 4.2-4). Latent mortalities detected at discharge temperatures of 25-35 C were statistically significant, although several exceptions occurred. In three out of

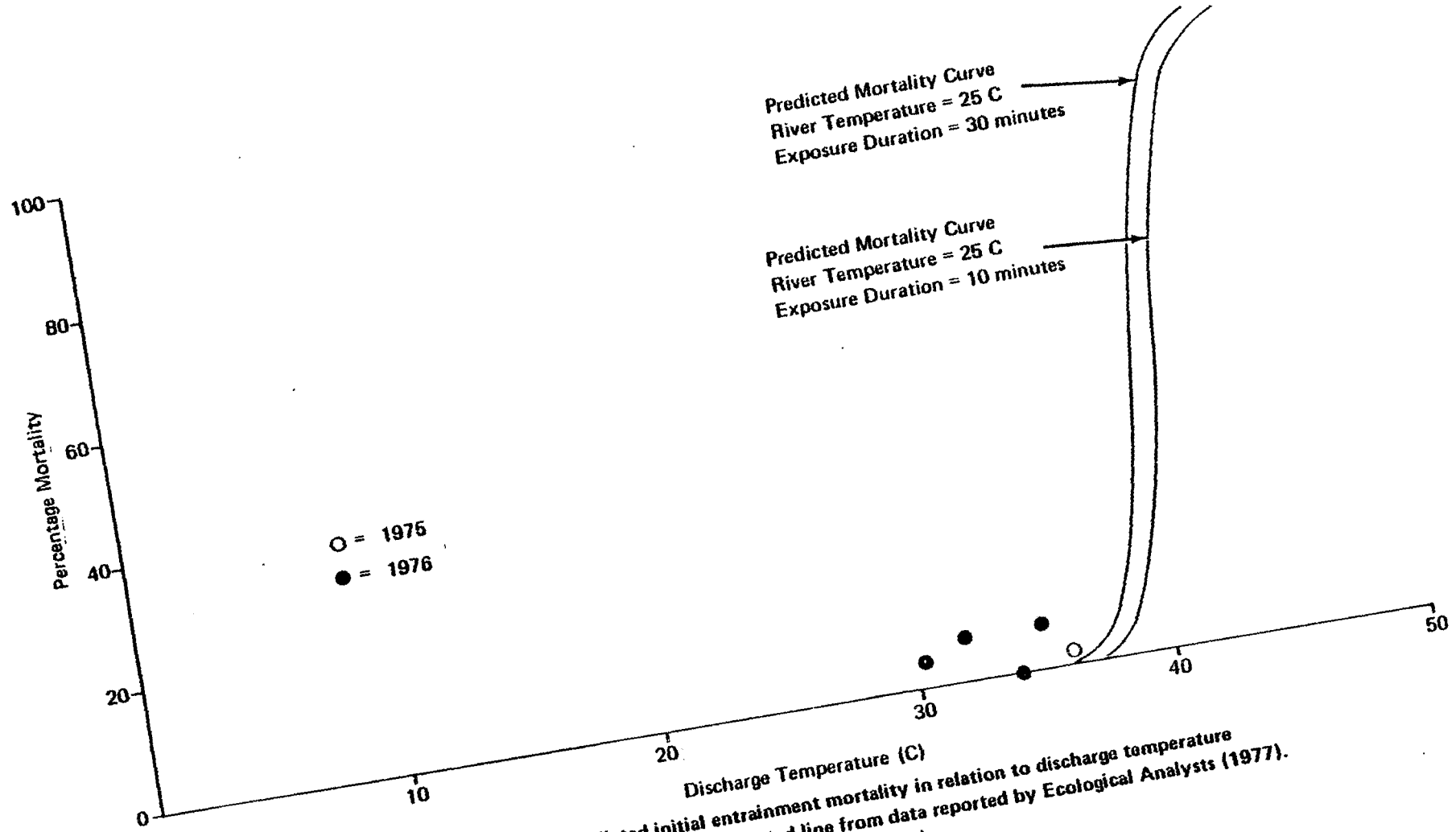


Figure 4.2-2. Empirical and predicted initial entrainment mortality in relation to discharge temperature for *Chaoborus punctipennis*. Predicted line from data reported by Ecological Analysts (1977). Empirical data from Bowline Point plant (1975-1976).

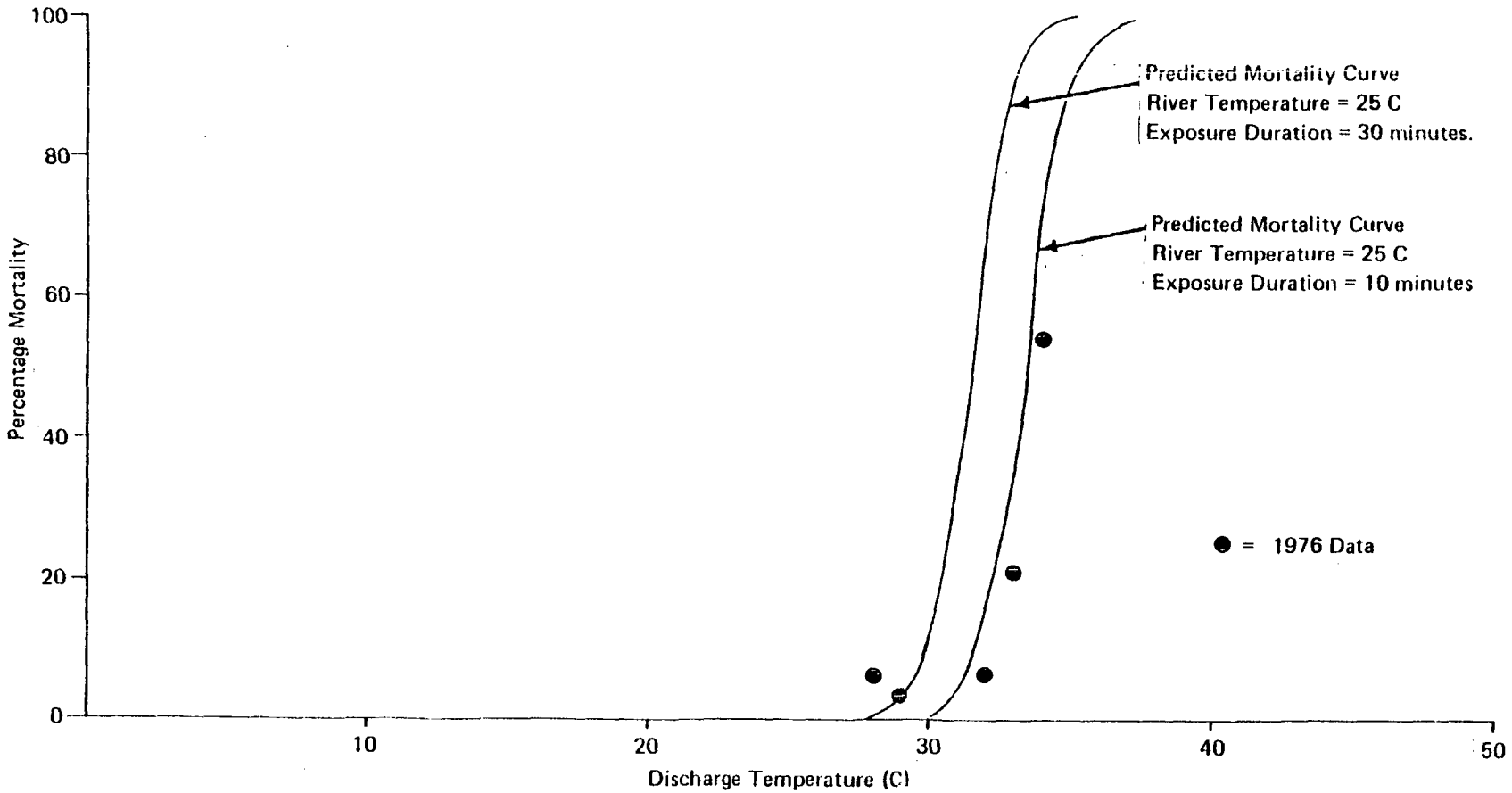


Figure 4.2-3. Empirical and predicted initial entrainment mortality in relation to discharge temperature for *Neomysis americana*. Predicted line from data reported by Ecological Analysts (1977). Empirical data from Bowline Point plant (1976).

TABLE 4.2-3 EVALUATION OF MACROZOOPLANKTON[a] LATENT (96-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1975

Taxon	Date	Temperature Range (C)		Percent Survival			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Gammarus daiberi	29 SEP - 1 OCT	19.5-20.0	23.5-28.5	83.1	(71)	71.0	(31)
Monoculodes edwardsi	29 JUL - 5 AUG	27.0-28.5	35.0-37.0	50.0	(40)	65.5	(29)
	29 SEP - 1 OCT	19.5-20.0	23.5-28.5	22.4	(49)	30.6	(49)
Chaoborus punctipennis	29 JUL - 5 AUG	27.0-28.5	35.0-37.0	55.1	(285)	60.3	(199)

(a) Latent survival is the proportion of organisms initially alive that survive to 96 hours.

TABLE 4.2-4 EVALUATION OF MACROZOOPLANKTON LATENT[a] (96-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1976

Taxon	Date	Temperature (C)		Percent Survival			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Gammarus daiberi	8 MAR	3.2	12.4	89.6	(29)	100.0	(28)
	10 MAY	15.8	25.2	86.7	(53)	45.0	(20)*
	24 MAY	16.5	23.5	15.0	(20)	37.1	(35)
	21 JUN	25.0	32.0	67.7	(62)	55.8	(34)
	26 JUL	24.5	34.0	90.9	(33)	96.4	(28)
	9 AUG	25.0	32.0	85.2	(34)	65.0	(20)*
	23 AUG	26.0	35.0	96.4	(28)	71.4	(21)*
	15 NOV	7.1	19.6	72.1	(61)	65.0	(60)
Monoculodes edwardsi	22 MAR	5.3	14.1	90.0	(70)	94.8	(58)
	5 APR	7.8	16.8	35.8	(53)	62.0	(29)
Neomysis americana	9 AUG	25.0	32.0	23.8	(21)	17.3	(23)
	27 SEP	21.0	29.0	60.8	(23)	65.7	(35)
	4 OCT	18.9	28.3	47.0	(34)	55.5	(36)
Chaoborus punctipennis	12 JUL	26.0	30.3	40.5	(37)	60.5	(38)
	26 JUL	24.5	34.0	70.5	(34)	88.3	(43)
	9 AUG	25.0	32.0	46.6	(30)	76.1	(21)
	23 AUG	26.0	35.0	52.7	(36)	50.0	(26)

(a) Latent survival is the proportion of organisms initially alive that survive to 96 hours.

Note: * indicates that discharge survival was significantly lower than intake survival at the $\alpha = 0.05$ level for a one-tailed t-test.

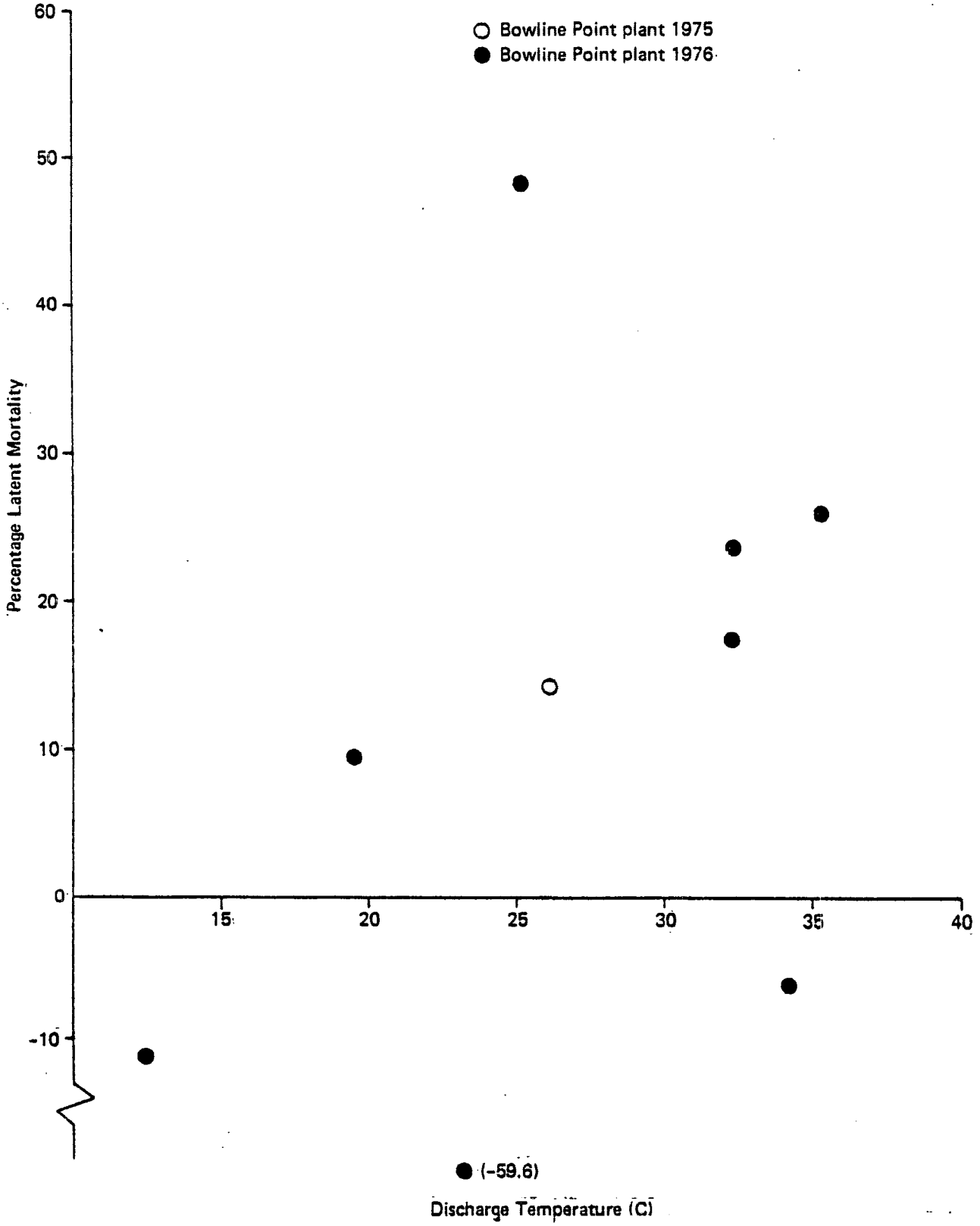


Figure 4.2-4. Latent entrainment mortality of *Gammarus daiberi* at the Bowline Point plant during 1975 and 1976.

NOTE: Negative mortality calculated as percentage difference between intake and discharge survival relative to discharge survival.

nine cases, intake survival was less than discharge survival, resulting in calculated negative mortalities up to -60 percent. No latent mortalities were detected for the other species tested.

4.2.2.3 Discussion

The upper thermal tolerances of three key macrozooplankters, N. americana, G. daiberi, and C. punctipennis, were examined in laboratory studies (Ecological Analysts 1977). The results of multiple experiments with each species were combined to form multiple linear regression models designed to predict thermal mortality given ambient or acclimation temperature, exposure duration, and test temperature. The results of the three models formed are presented in Table 4.2-5.

The thermal mortality models may be employed to predict the thermal component of entrainment mortality under a multitude of ambient temperature and plant operational conditions. However, for simplicity, two sets of conditions were selected to conservatively represent typical midsummer entrainment conditions. The regression models were solved for an ambient temperature of 25 C, and exposure durations of 10 and 30 minutes. Since entrainment durations vary from about 5.3 to 7.4 minutes at the Bowline Point plant (depending on pump mode), the conservative 10-minute exposure duration reflects the actual conditions. The 30-minute duration was selected to simulate the exposure duration typical of the entrainment sampling procedure, where entrained organisms were retained approximately 30 minutes at elevated temperatures in the sampling device. The predicted mortality curves resulting from these two sets of conditions are shown in Figures 4.2-1, 4.2-2, and 4.2-3, along with the empirical entrainment mortality data presented in Subsection 4.2.2.2.

TABLE 4.2-5 RESULTS OF MULTIPLE LINEAR REGRESSION MODELS PREDICTING THERMAL MORTALITY FOR GAMMARUS DAIBERI, CHAOBORUS PUNCTIPENNIS, AND NEOMYSIS AMERICANA(a)

Probit percentage mortality = $b_0 + b_1x_1 + b_2x_2 + b_3x_3$

where

b_0 = Y intercept
x_1 = acclimation temperature (C)
x_2 = log exposure duration (minutes)
x_3 = test temperature (C).

Neomysis americana

R^2 = 0.81; standard error of regression = 1.459; $F_{(2,15)}$ = 14.53;*
b_0 = -26.02; standard error of b_0 = 5.742 (variable x_1 not included for N. americana, tested only at 23-25 C).

i	b_i	Standard Error of b_i	Computed t-value
2	3.481	1.491	2.334*
3	0.822	0.154	5.319*

Gammarus daiberi

R^2 = 0.87; standard error of regression = 1.22; $F_{(3,44)}$ = 47.32;*
b_0 = -32.15; standard error of b_0 = 3.554.

i	b_i	Standard Error of b_i	Computed t-value
1	-0.2165	0.0737	-2.939*
2	1.868	0.546	3.423*
3	1.071	0.090	11.853*

Chaoborus punctipennis

R^2 = 0.79; standard error of regression = 1.224; $F_{(3,42)}$ = 23.21;*
b_0 = -29.09; standard error of b_0 = 4.363.

i	b_i	Standard Error of b_i	Computed t-value
1	0.248	0.0688	3.609*
2	1.566	0.646	2.423*
3	0.636	0.0785	8.106*

(a) Source: Ecological Analysts (1977).
Note: * indicates significant at = 0.05.

Discharge temperatures in 1975 and 1976 were less than temperatures expected to lead to appreciable mortality for G. daiberi and C. punctipennis. Based on the 10-minute exposure curves, little thermal mortality of G. daiberi would be expected at temperatures below 37 C. The equivalent critical threshold temperature for C. punctipennis was 40 C. The low levels of entrainment mortality observed in 1975 and 1976 for these species were therefore not related to temperature.

In contrast, the critical threshold temperature for N. americana was approximately 32 C, based on the 10-minute exposure curve. At discharge temperatures above 32 C, entrainment mortality rapidly increased, following the predicted curve. At discharge temperatures below 32 C, mortality of N. americana was very low and independent of temperature.

As mentioned in Subsection 4.2.2.2, G. daiberi sustained latent entrainment mortalities which were statistically significant at discharge temperatures of 25-35 C. The occurrence of these latent mortalities suggests that the thermal tolerance models described above underestimate the combined initial and latent entrainment mortality of G. daiberi, in some cases, despite the fact that the models were derived from 24-hour latent observations.

In conclusion, initial entrainment mortality estimates for major macrozooplankton species range from 0 to 15 percent (presumably due to mechanical or pressure stresses) at discharge temperatures below upper lethal thermal thresholds as determined from laboratory studies. However, at temperatures above the critical threshold for each species, dramatic increases in mortality are expected. With the exception of N. americana, this threshold lies at or above 37 C during midsummer. Since discharge temperatures remained below that level during sampling in 1975 and 1976, little initial mortality

was observed, except for N. americana. One species, G. daiberi, displayed latent entrainment mortalities generally less than 25 percent (although in one case the latent value was 48 percent) at discharge temperatures of 25-35 C, below the predicted threshold. The occurrence of latent mortalities suggests the synergistic effects of temperature and prolonged sampling exposure or of temperature and other entrainment stresses in the case of G. daiberi. No latent effects were demonstrated for any other species.

4.2.3 Microzooplankton

4.2.3.1 Methods

4.2.3.1.1 Collection Methods

Microzooplankton samples were collected at both the intake and discharge sites by pumping water (using a Midland Midwhirl 4-in. centrifugal pump) directly into a 76-μ mesh plankton net suspended in a tank of water. The volume of the sample, determined with a 90° V-notch weir or an in-line flowmeter, depended upon organism abundance and detrital load.

4.2.3.1.2 Experimental Methods

The volume of the net concentrate was adjusted to 800 ml. From each thoroughly mixed sample, numerous 5-ml aliquots were removed and incubated for initial and latent effects observations. Each aliquot was placed in an incubation dish to which 5 ml of filtered river water was added. During 1975, three of the aliquots were observed initially and at 6, 12, 24, 48, 72, and 96 hours following collection; in 1976, the 6-, 12-, and 96-hour observations were omitted. The dishes were covered to prevent evaporation and maintained at ambient river water temperature. After the subsamples

for incubation were removed, the remaining sample was preserved in a 5 percent formalin solution and labeled.

The initial and latent effects observations were made at 25 and 40X magnifications. The dead organisms were identified and counted at each observation. The criterion for death was the failure of an organism to respond to a gentle probing stimulus. After the count was completed, the aliquot was preserved in a 5 percent formalin solution and labeled. Total population counts for each aliquot were made at a later date.

4.2.3.1.3 Statistical Methods

The analysis of entrainment survival involved the determination of survival at the intake and discharge. The survival data of the three replicate 5-ml aliquots were combined for statistical analysis as described in Subsection 4.2.2.1.3.

Initial and latent (48-hour) survival at the intake and discharge were compared for each sample date. Studies in 1976 were originally designed to observe the differences in survival throughout 72 hours. Data obtained after 48 hours of latent observations were of questionable value due to predation and the rate of decay of dead organisms and their subsequent loss from cultures. For this reason, only data obtained during the first 48 hours of latent observations were considered for statistical comparison.

4.2.3.2 Results

4.2.3.2.1 Intake and Discharge Survival

Initial survival of microzooplankton species at the intake and discharge is shown in Table 4.2-6 for 1975, where results of multiple samples collected

TABLE 4.2-6 EVALUATION OF MICROZOOPLANKTON INITIAL (0-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1975

Date	Temperature (C) Intake	Discharge	Percentage Survival[a] Intake (n_1)	Discharge (n_2)
Total Microzooplankton				
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	76.3 (9,190)	56.8 (8,264)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	63.2 (625)	63.7 (699)
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	72.9 (1,330)	54.3 (792)*
Copepod Nauplii				
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	77.2 (7,764)	55.2 (7,093)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	40.4 (156)	27.9 (136)*
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	73.4 (791)	50.3 (529)*
Eurytemora affinis				
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	92.0 (472)	51.4 (107)*
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	82.9 (82)	40.9 (22)*
Acartia tonsa				
29 JUL - 5 AUG	26.0-28.0	35.0-27.0	75.9 (29)	33.0 (91)*
Halicyclops fosteri				
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	83.2 (113)	64.2 (67)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	79.5 (327)	81.4 (312)
Bosmina longirostris				
29 JUL - 5 AUG	21.0-28.0	35.0-37.0	85.7 (35)	50.8 (65)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	73.5 (49)	85.5 (69)
Keratella cochlearis				
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	32.1 (28)	46.8 (77)
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	53.7 (41)	62.9 (35)
Notholca accuminata				
10 DEC - 12 DEC	5.5-6.0	11.0-11.0	71.9 (377)	65.3 (150)
Gastropod Veliger				
29 JUL - 5 AUG	26.0-26.0	35.0-37.0	85.8 (162)	63.3 (251)*

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

over short periods of time were combined to give three distinct seasonal samples. Table 4.2-7 contains 1976 data. Survival calculations were made in those cases where intake and discharge sample sizes from combined aliquots were 20 or larger for a given taxon.

During both 1975 and 1976, about three fourths of the intake-discharge comparisons revealed reductions in discharge survival. The reductions (significant and nonsignificant) were distributed among the various species examined, and appeared not to be related to discharge temperatures.

Combined initial and latent (48-hour) survival data for microzooplankton species in 1975 and 1976 are shown in Tables 4.2-8 and 4.2-9, respectively. During both 1975 and 1976, about 60 percent of the intake-discharge comparisons revealed reductions in discharge survival. As in the initial sample, the reductions were distributed among the various species examined and appeared not to be related to discharge temperatures.

4.2.3.2.2 Entrainment Mortality Estimates

Microzooplankton initial entrainment mortalities were calculated for those cases in which intake-discharge survival comparisons were made (Table 4.2-10). Entrainment mortalities were also estimated from the 48-hour data and are shown in Table 4.2-11. Mean initial entrainment mortalities calculated for total microzooplankton were 17.3 and 4.5 percent for 1975 and 1976, respectively. Mean 48-hour mortalities were 19.9 and 6.1 percent.

Frequencies of occurrence of entrainment mortality levels obtained in 1975 and 1976 are presented in Table 4.2-12. In 1976 over half of the calculated mortalities were less than 10 percent in both initial and latent

TABLE 4.2-7 EVALUATION OF MICROZOOPLANKTON INITIAL (0-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1976

Species	Date	Temperature (C)		Percentage Survival[a]			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Total micro-zooplankton	8 MAR	3.2	12.4	53.4	(88)	54.0	(74)
	22 MAR	5.0	14.4	33.6	(520)	45.6	(171)
	5 APR	7.8	16.8	34.7	(92)	57.1	(42)
	26 APR	10.6	19.7	43.7	(990)	60.2	(680)
	10 MAY	15.8	25.2	70.9	(1,655)	38.9	(488)*
	24 MAY	16.5	23.9	69.8	(3,260)	45.8	(1,559)*
	7 JUN	18.7	27.6	60.9	(1,866)	38.3	(1,074)*
	21 JUN	24.5	33.0	60.0	(3,352)	56.6	(2,951)*
	12 JUL	25.1	29.1	75.7	(713)	79.0	(624)
	27 JUL	24.0	32.6	93.2	(1,323)	94.4	(3,507)
	9 AUG	25.0	32.0	88.0	(327)	80.4	(1,294)*
	23 AUG	26.0	35.0	96.6	(4,776)	87.0	(1,686)*
	13 SEP	23.5	33.0	92.3	(2,247)	89.0	(1,416)*
	27 SEP	21.0	29.0	96.9	(1,121)	93.0	(790)*
	4 OCT	18.9	28.3	96.6	(148)	91.5	(238)*
	25 OCT	12.8	24.8	70.5	(560)	60.9	(1,097)*
	1 NOV	10.0	21.6	59.7	(880)	49.0	(724)*
	15 NOV	7.2	19.9	63.1	(328)	58.2	(199)
	6 DEC	3.7	16.2	84.7	(1,060)	84.4	(954)
Copepod nauplii	22 MAR	5.0	14.4	32.5	(455)	43.0	(144)
	5 APR	7.8	16.8	22.2	(36)	57.1	(35)
	26 APR	10.6	19.7	43.1	(878)	60.7	(606)
	10 MAY	15.8	25.2	49.5	(452)	15.2	(230)*
	24 MAY	16.5	23.9	56.1	(837)	31.9	(244)*
	7 JUN	18.7	27.6	68.6	(1,118)	34.7	(492)*
	21 JUN	24.5	33.0	52.1	(1,078)	42.2	(873)*
	12 JUL	25.1	29.1	68.7	(326)	74.9	(271)
	27 JUL	24.0	32.6	92.3	(757)	94.5	(3,003)
	9 AUG	25.0	32.0	83.7	(129)	79.5	(1,101)
	23 AUG	26.0	35.0	97.2	(4,197)	88.5	(1,419)*
	13 SEP	23.5	33.0	93.2	(2,029)	91.1	(1,303)*
	27 SEP	21.0	29.0	97.2	(993)	93.3	(661)*
	4 OCT	18.9	28.3	96.4	(114)	91.2	(194)*
	25 OCT	12.8	24.8	54.0	(50)	55.0	(423)
	1 NOV	10.0	21.6	63.2	(106)	59.7	(144)
	6 DEC	3.7	16.2	87.2	(836)	84.5	(692)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-7 (CONT.)

Species	Date	Temperature (C) Intake	Temperature (C) Discharge	Percentage Survival[a] Intake	(n_1)	Percentage Survival[a] Discharge	(n_2)
Eurytemora affinis	7 JUN	18.7	27.6	72.5	(51)	41.2	(80)*
	12 JUL	25.1	29.1	82.9	(41)	80.9	(21)
	27 JUL	24.0	32.6	97.2	(36)	96.6	(30)
	6 DEC	3.7	16.2	100.0	(43)	86.6	(30)*
Acartia tonsa	27 JUL	24.0	32.6	94.9	(158)	91.9	(62)
	23 AUG	26.0	35.0	90.6	(64)	71.4	(21)*
	27 SEP	21.0	29.0	96.7	(61)	86.0	(50)*
Halicyclops fosteri	10 MAY	15.8	25.2	94.0	(50)	82.0	(39)*
	7 JUN	18.7	27.6	88.0	(25)	75.5	(45)
	21 JUN	24.5	33.0	88.5	(87)	83.4	(121)
	25 OCT	12.8	24.8	96.6	(89)	91.3	(23)
	1 NOV	10.0	21.6	92.5	(67)	83.7	(43)
Bosmina longirostris	7 JUN	18.7	27.6	91.5	(59)	93.1	(44)
	21 JUN	24.5	33.0	85.8	(78)	75.9	(54)
	12 JUL	25.1	29.1	84.3	(32)	88.0	(50)
	25 OCT	12.8	24.8	97.1	(70)	75.0	(28)*
	6 DEC	3.7	16.2	81.8	(77)	91.9	(124)
Keratella cochlearis	10 MAY	15.8	25.2	85.9	(228)	56.9	(65)*
	24 MAY	16.5	23.9	78.7	(1,183)	64.9	(377)*
	7 JUN	18.7	27.6	22.1	(307)	24.7	(251)
	21 JUN	24.5	33.0	35.4	(708)	60.9	(801)
	25 OCT	12.8	24.8	50.6	(221)	49.6	(475)
	1 NOV	10.0	21.6	45.7	(485)	32.5	(375)*
	15 NOV	7.2	19.9	64.2	(95)	64.5	(62)
	6 DEC	3.7	16.2	26.1	(42)	58.8	(34)
Notholca accuminata	8 MAR	3.2	12.4	57.6	(26)	45.0	(20)
	24 MAY	16.5	23.9	73.2	(325)	28.2	(418)*
	21 JUN	24.5	33.0	77.1	(752)	58.1	(564)*
	1 NOV	10.0	21.6	75.7	(66)	65.7	(35)
	15 NOV	7.2	19.9	50.0	(90)	40.6	(59)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-7 (CONT.)

Species	Date	Temperature (C) Intake	Discharge	Percentage Survival(a) Intake	(n_1)	Discharge	(n_2)
Kellicottia longispina	24 MAY	16.5	23.9	72.0	(43)	42.0	(50)*
	7 JUN	18.7	27.6	59.5	(42)	31.3	(51)*
	21 JUN	24.5	33.0	58.3	(36)	38.4	(26)
Brachionus calyciflorus	24 MAY	16.5	23.9	65.1	(43)	46.0	(50)*
	21 JUN	24.5	33.0	76.8	(320)	64.0	(300)*
	1 NOV	10.0	21.6	64.7	(34)	52.6	(38)
Pelecypod veliger	27 JUL	24.0	32.6	97.1	(35)	98.3	(62)
	23 AUG	26.0	35.0	86.5	(52)	62.9	(54)*
Gastropod veliger	12 JUL	25.1	29.1	88.6	(167)	97.5	(120)
	27 JUL	24.0	32.6	93.7	(96)	93.0	(115)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-8 EVALUATION OF MICROZOOPLANKTON COMBINED INITIAL AND LATENT (48-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1975

Date	Temperature (C) Intake	Temperature (C) Discharge	Percentage Survival[a] Intake	(n_1)	Percentage Survival[a] Discharge	(n_2)
Total Microzooplankton						
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	65.0	(2,628)	31.3	(2,166)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	46.5	(561)	65.3	(504)
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	53.1	(729)	33.6	(578)*
Copepod Nauplii						
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	57.9	(1,672)	25.5	(1,701)*
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	69.4	(337)	32.8	(409)*
Eurytemora affinis						
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	82.8	(87)	40.0	(25)*
Acartia tonsa						
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	59.7	(67)	34.8	(46)*
Halicyclops fosteri						
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	52.4	(313)	73.9	(272)
Bosmina longirostris						
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	72.7	(33)	31.0	(29)*
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	63.0	(73)	66.7	(81)
Keratella cochlearis						
29 SEP - 1 OCT	20.0-20.0	27.5-29.0	28.9	(38)	57.3	(75)
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	19.0	(21)	26.7	(30)
Notholca accuminata						
16 DEC - 17 DEC	5.5-6.0	11.0-11.0	16.6	(235)	33.3	(78)
Gastropod Veliger						
29 JUL - 5 AUG	26.0-28.0	35.0-37.0	64.1	(92)	55.7	(140)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-9 EVALUATION OF MICROZOOPLANKTON COMBINED INITIAL AND LATENT (48-HOUR) SURVIVAL DATA AT THE BOWLINE POINT PLANT, 1976

Species	Date	Temperature (C)		Percentage Survival(a)			
		Intake	Discharge	Intake	(n_1)	Discharge	(n_2)
Total microzooplankton	8 MAR	3.2	12.4	56.3	(55)	49.3	(83)
	22 MAR	5.0	14.4	51.7	(512)	59.4	(153)
	5 APR	7.8	16.8	66.2	(83)	61.1	(54)
	26 APR	10.6	19.7	55.2	(577)	45.3	(543)*
	10 MAY	15.8	25.2	63.3	(1,027)	52.2	(544)*
	24 MAY	16.5	23.9	76.7	(1,980)	48.1	(1,458)*
	7 JUN	18.7	27.6	26.4	(995)	17.7	(813)*
	21 JUN	24.5	33.0	52.7	(2,351)	59.4	(1,888)
	12 JUL	25.1	29.1	66.1	(411)	47.2	(292)*
	27 JUL	24.0	32.6	74.6	(512)	86.0	(1,676)
	9 AUG	25.0	32.0	76.3	(220)	73.5	(526)
	23 AUG	26.0	35.0	77.3	(2,562)	75.8	(1,103)
	13 SEP	23.5	33.0	76.2	(1,251)	84.4	(785)
	27 SEP	21.0	29.0	75.4	(465)	83.5	(455)
	4 OCT	18.9	28.3	94.4	(181)	87.0	(131)*
	25 OCT	12.8	24.8	59.6	(528)	60.2	(970)
	1 NOV	10.0	21.6	66.0	(777)	69.5	(614)
	15 NOV	7.2	19.9	64.8	(242)	64.0	(203)
	6 DEC	3.7	16.2	78.7	(330)	70.6	(286)*
Copepod nauplii	22 MAR	5.0	14.4	52.0	(459)	58.9	(129)
	5 APR	7.8	16.8	69.6	(33)	69.5	(23)
	26 APR	10.6	19.7	52.6	(469)	43.8	(474)*
	10 MAY	15.8	25.2	39.1	(240)	42.4	(231)
	24 MAY	16.5	23.9	62.3	(69)	34.7	(187)*
	7 JUN	18.7	27.6	17.7	(457)	19.1	(297)
	21 JUN	24.5	33.0	42.1	(472)	37.1	(218)
	12 JUL	25.1	29.1	53.9	(89)	42.3	(26)
	27 JUL	24.0	32.6	90.3	(83)	85.9	(1,142)
	9 AUG	25.0	32.0	90.4	(84)	68.9	(319)*
	23 AUG	26.0	35.0	77.6	(2,191)	78.9	(880)
	13 SEP	23.5	33.0	77.2	(1,137)	84.6	(703)
	27 SEP	21.0	29.0	82.0	(350)	85.1	(309)
	4 OCT	18.9	28.3	94.6	(149)	88.4	(104)*
	25 OCT	12.8	24.8	45.1	(31)	55.4	(361)
	1 NOV	10.0	21.6	50.0	(78)	46.8	(96)
	6 DEC	3.7	16.2	95.2	(169)	86.3	(66)*

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-9 (CONT.)

Species	Date	Temperature (C) Intake	Temperature (C) Discharge	Percentage Survival(a) Intake	(n_1)	Percentage Survival(a) Discharge	(n_2)
Eurytemora affinis	7 JUN	18.7	27.6	17.2	(29)	20.3	(59)
	27 JUL	24.0	32.6	93.7	(48)	96.0	(25)
	6 DEC	3.7	16.2	93.3	(45)	90.9	(55)
Acartia tonsa	27 JUL	24.0	32.6	51.3	(74)	79.6	(103)
	23 AUG	26.0	35.0	68.9	(87)	50.0	(40)*
	27 SEP	21.0	29.0	20.9	(43)	52.1	(46)
Halicyclops fosteri	10 MAY	15.8	25.2	85.0	(67)	100.0	(27)
	7 JUN	18.7	27.6	66.6	(30)	52.7	(36)
	21 JUN	24.5	33.0	87.6	(73)	73.1	(97)*
	1 NOV	10.0	21.6	88.4	(52)	85.7	(42)
Bosmina longirostris	7 JUN	18.7	27.6	90.7	(65)	66.6	(60)*
	21 JUN	24.5	33.0	48.0	(100)	65.7	(108)
	12 JUL	25.1	29.1	68.9	(58)	65.2	(46)
	25 OCT	12.8	24.8	88.1	(76)	58.3	(24)*
	6 DEC	3.7	16.2	39.1	(23)	61.5	(65)
Keratella cochlearis	10 MAY	15.8	25.2	94.3	(212)	76.9	(78)*
	24 MAY	16.5	23.9	86.3	(971)	74.8	(409)*
	7 JUN	18.7	27.6	16.8	(267)	10.1	(177)*
	21 JUN	24.5	33.0	60.0	(681)	60.7	(675)
	25 OCT	12.8	24.8	43.8	(210)	67.9	(440)
	1 NOV	10.0	21.6	68.3	(468)	80.7	(338)
	15 NOV	7.2	19.9	69.1	(81)	68.1	(44)
	6 DEC	3.7	16.2	0.0	(32)	15.6	(32)
Notholca accuminata	24 MAY	16.5	23.9	67.6	(523)	34.4	(429)*
	21 JUN	24.5	33.0	48.6	(646)	56.5	(502)
	1 NOV	10.0	21.6	67.2	(61)	59.3	(32)
	15 NOV	7.2	19.9	65.7	(73)	62.0	(58)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-9 (CONT.)

Species	Date	Temperature (C) Intake	Temperature (C) Discharge	Percentage Survival[a] Intake	(n_1)	Percentage Survival[a] Discharge	(n_2)
Kellicottia longispina	24 MAY	16.5	23.9	90.3	(52)	24.1	(58)*
	7 JUN	18.7	27.6	8.8	(34)	0.0	(46)*
	21 JUN	24.5	33.0	68.9	(29)	65.0	(20)
Brachionus calyciflorus	24 MAY	16.5	23.9	55.1	(49)	30.5	(59)*
	21 JUN	24.5	33.0	20.1	(174)	50.0	(132)
	1 NOV	10.0	21.6	48.7	(39)	32.5	(43)
Pelecypod veliger	27 JUL	24.0	32.6	33.3	(30)	57.7	(45)
	23 AUG	26.0	35.0	11.5	(26)	33.3	(39)
Gastropod veliger	12 JUL	25.1	29.1	74.1	(147)	25.5	(137)*
	27 JUL	24.0	32.6	76.9	(130)	91.7	(158)

(a) n_1 and n_2 represent intake and discharge sample sizes, respectively.

Note: * indicates survival at the discharge significantly lower than that at the intake at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-10 INITIAL (0-HOUR) MORTALITY ESTIMATES[a] (%) FOR MICROZOOPLANKTON ENTRAINED AT THE BOWLINE POINT PLANT, 1975 AND 1976*

Date	Intake Temp.(C)	Discharge Temp.(C)	Total Microzoo-plankton	Copepod Nauplii	Eurytemora affinis	Acartia tonsa	Halicyclops fosteri	Bosmina longirostris	Keratella cochlearis	Notholca accuminata	Kellicottia longispina	Brachionus calyciflorus	Pelecypod Veliger	Gastropod Veliger
1976														
8 MAR	3.2	12.4	-1.1							21.9				
22 MAR	5.0	14.4	-26.3	-24.4										
5 APR	7.8	16.8	-39.2	-61.1										
26 APR	10.6	19.7	-27.4	-29.0										
10 MAY	15.8	25.2	45.1*	69.2*			12.7*		33.7*					
24 MAY	16.5	23.9	34.3*	43.0*					17.5*	61.4*	41.7*	29.3*		
7 JUN	18.7	27.6	37.0*	49.4*	43.1*		14.2	-1.7	-10.5		47.2*			
21 JUN	24.5	33.0	5.7*	18.9*			5.8	11.5	-41.9	24.5*	34.1	16.7*		
12 JUL	25.1	29.1	-4.2	-8.3	2.4			-4.2						-9.1
27 JUL	24.0	32.6	-1.3	-2.3	0.6	3.1							-1.2	0.7
9 AUG	25.0	32.0	8.6*	5.0										
23 AUG	26.0	35.0	9.9*	8.8*		21.1*							27.2*	
13 SEP	23.5	33.0	3.5*	2.2*										
27 SEP	21.0	29.0	4.0*	4.0*		11.0*								
4 OCT	18.9	28.3	5.2*	5.4*										
25 OCT	12.8	24.8	13.5*	-16.9			5.5	22.7*	2.0					
1 NOV	10.0	21.6	17.9*	5.5			9.5		28.9*	13.2		18.7		
15 NOV	7.2	19.9	7.6						-0.5	18.8				
6 DEC	3.7	16.2	0.2	3.1	13.3*			-11.0	-55.6					
Mean			4.5											
1975[b]														
29 JUL-5 AUG	26.0-28.0	35.0-37.0	25.5*	28.4*	44.1*	56.5*	22.8*	40.7*						26.1*
29 SEP-1 OCT	20.0	27.5-29.0	-0.8	30.8*			-2.3	-14.0	-31.4					
16 DEC-17 DEC	5.5-6.0	11.0	25.5*	31.5*	50.6*				-14.6	8.8				
Mean			17.3											

(a) Entrainment mortality is defined by Equation 7.2-4.
(b) Temperatures given are observed ranges over indicated dates.

Note: Negative mortality calculated as percentage differences between intake and discharge survival relative to discharge survival:

$$\frac{\text{Intake survival} - \text{Discharge survival}}{\text{Discharge survival}} \times 100\%$$

Blanks indicate insufficient number of organisms for data analysis.
* denotes cases in which discharge survival was significantly lower than intake survival at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-11 COMBINED INITIAL AND LATENT MORTALITY (48-HOUR) ESTIMATES[a] (%) FOR MICROZOOPLANKTON AT THE BOWLINE POINT PLANT, 1975 AND 1976

Date	Intake Temp. (C)	Discharge Temp. (C)	Total Microzoo-plankton	Copepod Nauplii	Eurytemora affinis	Acartia tonsa	Halicyclops fosteri	Bosmina longirostris	Keratella cochlearis	Notholca accuminata	Kellicottia longispina	Brachionus calyciflorus	Pelecypod Veliger	Gastropod Veliger
							1976							
8 MAR	3.2	12.4	12.3											
22 MAR	5.0	14.4	-13.0	-11.7										
5 APR	7.8	16.8	7.7	0.1										
26 APR	10.6	19.7	18.0*	16.6*										
10 MAY	15.8	25.2	17.6*	-7.8			-15.0		18.4*					
24 MAY	16.5	23.9	37.2*	44.2*					13.3*	49.0*	73.2*	44.6*		
7 JUN	18.7	27.6	32.9*	-7.3	-15.3		20.9	26.5*	39.6*		100.0*			
21 JUN	24.5	33.0	-11.3	11.9			16.5*	-26.9	-1.2	-14.0	5.7	-59.8		
12 JUL	25.1	29.1	28.5*	21.5				5.4						65.5*
27 JUL	24.0	32.6	-13.3	4.9	-2.4	-18.7							-42.3	-16.1
9 AUG	25.0	32.0	3.7	23.7*										
23 AUG	26.0	35.0	1.9	-1.6		27.4*							-65.5	
13 SEP	23.5	33.0	-9.7	-8.6										
27 SEP	21.0	29.0	-9.7	-3.6		-59.9								
4 OCT	18.9	28.3	7.8*	6.5*										
25 OCT	12.8	24.8	-1.0	-18.6				33.8*	-35.5					
1 NOV	10.0	21.6	-5.0	6.4			3.0		-15.4	11.8		33.3		
15 NOV	7.2	19.9	1.2						1.3	5.6				
6 DEC	3.7	16.2	10.3*	9.3*	2.6			-36.4						
Mean			6.1											
							1975[b]							
29 JUL	26.0-	35.0-												
5 AUG	28.0	37.0	51.8*	55.9*		41.7*		57.3*						13.1
29 SEP	20.0	27.5												
1 OCT		29.0	-28.8				-29.1	-5.6	-49.6					
16 DEC	5.5-	11.0												
17 DEC	6.0		36.7*	52.8*	51.6*				-28.8	-50.2				
Mean			19.9											

(a) Entrainment mortality is defined by Equation 7.2-4.
(b) Temperatures given are observed ranges over indicated dates.

Note: Negative mortality calculated as percentage difference between intake and discharge survival relative to discharge survival:

$$\frac{\text{Intake survival} - \text{Discharge survival}}{\text{Discharge survival}} \times 100\% .$$

Blanks indicate insufficient number of organisms for data analysis.
* denotes cases in which discharge survival was significantly lower than intake survival at the $\alpha = 0.05$ level for a one-tailed t-test.

TABLE 4.2-12 FREQUENCIES OF OCCURRENCE OF ENTRAINMENT MORTALITY LEVELS IN 1975 AND 1976

Entrainment Mortality Range (%)	1975 Number of Mortalities Observed	1975 Cumulative Percentage of Total	1976 Number of Mortalities Observed	1976 Cumulative Percentage of Total
Initial (0-hr)				
0- 9(a)	6	35	44	58
10-19	0	35	13	75
20-29	5	65	7	84
30-39	2	76	4	89
40-49	2	88	6	97
>50	2	100	2	100
Combined Initial and Latent (48-hr)				
0- 9(a)	6	43	46	63
10-19	1	50	10	77
20-29	0	50	6	85
30-39	1	57	5	92
40-49	1	64	3	96
>50	5	100	3	100

(a) Includes cases in which intake survival was less than discharge survival.

samples. In 1975 the fraction was just over one-third. Only a small fraction (4-12 percent) of the mortalities was greater than 50 percent in both years, except in the 48-hour data for 1975. In this case, 5 out of 14 intake-discharge comparisons resulted in entrainment mortalities in excess of 50 percent. The 24-hour mortality data for these cases revealed only two mortalities in excess of 50 percent, indicating that latent mortalities may have increased between 24 and 48 hours in three cases. The frequency distribution of 24-hour mortalities was actually skewed more toward low mortalities than that of the initial case. Variability in the 48-hour samples due to predation or decomposition may have accounted for the apparent increases in latent mortality observed in these three cases.

In numerous cases in both 1975 and 1976, discharge survival exceeded intake survival. This condition was attributed to the small sample sizes tested, natural variability in the entrained populations, and experimental error.

For purposes of illustration, in those cases where discharge survival exceeded intake survival, differences between intake and discharge survival in relation to discharge survival were calculated, and indicated as negative percentage mortalities in Tables 4.2-10 and 4.2-11. (Based on this method of calculation, the maximum negative mortality obtainable is 100 percent, and would occur in cases where intake survival was zero and discharge survival was some value greater than zero.) Negative mortalities as great as 61 percent in the initial data and 65 percent in the 48-hour data were observed, indicating that sampling or experimental variability may have been greater than actual entrainment effects.

Entrainment mortalities were greatest in 1976 during the spring (May-June) and fall (October-November). Discharge temperatures during these periods

ranged from 19.9 to 33 C. No relationship between discharge temperature and magnitude of entrainment mortality was observed. A correlation was observed, however, between plant pumping rate and entrainment mortality. The plant pumping schedule on those dates sampled is shown in Table 4.2-13. The periods during which two pumps were operated in the throttled condition correspond closely with periods of high entrainment mortality.

4.2.3.3 Discussion

Microzooplankton entrainment survival studies at the Bowline Point plant in 1975 and 1976 have led to the following conclusions:

1. Entrainment mortality was generally minimal (less than 20 percent), and was not related to discharge temperatures over the range observed--up to 37 C.
2. Entrainment mortality was higher during spring and fall 1976, when the units sampled were operating with the circulation pumps in the two-pump throttled mode. This mode may be characterized by higher mechanical and pressure stresses, leading to increased mortality.
3. The occurrence of significant latent entrainment effects was limited to a few cases in 1975, where latent mortalities increased substantially between 24 and 48 hours. Predation and/or decomposition may have led to the latent mortalities observed.
4. Increases in entrainment mortality should be expected at high discharge temperatures based on other studies. Lauer et al. (1974), in studies at Indian Point, reported a 15-minute TL50 of 36 C for the copepods E. affinis and A. tonsa acclimated to summer ambient

TABLE 4.2-13 BOWLINE POINT PLANT PUMPING SCHEDULE FOR MICROINVERTEBRATE SAMPLING DATES IN 1976

Sample Period	Unit Sampled	Pumping Rate (gpd x 10^6)	Number of Pumps Operating
8 MAR - 7 JUN	2	370	2 (throttled)
21 JUN - 4 OCT	2	455	2 (full)
25 OCT - 6 DEC	1	370	2 (throttled)

temperatures. Zubarik (1976) reported upper lethal temperatures of 34-36 C for E. affinis acclimated to 21-26 C following 15-minute exposures. Thus, as temperatures approach the mid-30s C, entrainment mortality might be expected to increase for these species due to thermal effects alone.

REFERENCES: SECTION 4.2

Ecological Analysts, Inc. 1977. Hudson River Thermal Effects Studies for Representative Species. Volume 1. Second Progress report prepared for Central Hudson Gas & Electric Corporation.

Lauer, G. J., W. T. Waller, D. W. Bath, W. Meeks, R. Heffner, T. Ginn, L. Zubarik, P. Bibko, and P. C. Storm. 1974. Entrainment studies on Hudson River organisms. EPRI Report No. 15, pp. 37-82.

Sokal, R. R. and F. J. Rohlf. 1969. Biometry. W. H. Freeman and Co. San Francisco, Calif. 776 pp.

Zubarik, L. 1976. Effects of entrainment on microzooplankton at a nuclear power plant. In Fourth Symposium on Hudson River Ecology. The Hudson River Environmental Socitey, Inc. Paper No. 24.

4.3 PHYTOPLANKTON

4.3.1 Introduction

Studies were conducted at the Bowline Point Generating Station during 1976 to determine the effects of entrainment on phytoplankton. This work was a continuation of experimental studies on phytoplankton begun by Ecological Analysts, Inc., in 1975.

Primary productivity, species densities, biomass, concentrations of pigments, and adenosine triphosphate (ATP) were measured in samples collected from the intake and discharge of the condenser cooling water system. Measurements of the physiological state of the organisms were also made using fluorescence microscopy. The intake samples served as a control for comparison with the discharge station. The sample analyses were made immediately following collection and 24 hours thereafter. Samples were collected twice per month from April through November. This schedule was designed to provide comprehensive coverage of seasonal variations in species composition, ambient physical-chemical conditions, and plant thermal load.

4.3.2 Methods and Materials

4.3.2.1 Sample Collection

Duplicate samples with a minimum of 12 liters of water were collected from each sampling site with a Van Dorn bottle and composited. At the intake site, equal volumes were taken just below the surface and near the bottom, and composited. Temperature, tidal stage, and time of collection were recorded for each depth sampled. The discharge sample was obtained from the standpipe at Unit 1. Turbulent mixing in the circulating water system

prevents vertical stratification. After collecting the water at each site, the buckets were held in sealed containers within the incubation troughs for the latent effects studies.

At the start of each field day, two recording pyrheliometers (24 and 192 hours) were placed in the vicinity of the incubation troughs and set to the appropriate time to record solar intensity during the study period. At the start of successive field days, the 24-hour data sheet was replaced.

The incubation troughs were located in an unshaded area. The water entering each incubation trough was collected from the vicinity of the Bowline intake and pumped to the troughs by means of shallow-well jet pumps. Temperatures within these troughs having flow-through waters remained within 1-2 C of the incoming water, even on the warmest day of study. The troughs were painted black to minimize reflection of sunlight. The primary productivity bottles were held horizontally by a utility clamp so that each bottle was approximately 1 in. above the bottom of the trough and 1 in. below the water's surface within the trough.

4.3.2.2 Sample Analysis Types

4.3.2.2.1 Primary Productivity

Primary productivity was measured in this study by determining the rate of uptake of carbon 14. From each sample, 100 ml of water was placed in each of four bottles. To each bottle 0.5 ml of $NaHC^{14}O_3$ (activity 1 µCi/ml) was added. Two of the four bottles were completely wrapped with aluminum foil and the other two bottles remained exposed to the light. The bottles were inserted in a random manner into the incubation troughs and incubated at ambient (intake) water temperature for a minimum of four hours.

Following incubation, the entire contents of each light bottle were filtered through 0.45-μ filters and placed into labeled liquid scintillation vials filled with "cocktail fluor." After filtration of the light bottles was finished, the procedure was repeated for the dark bottles. Bottles were filtered in a random manner.

At the time of inoculation of the sample bottles, two liquid scintillation vials were inoculated with 0.1 ml of the radioactive carbon solution. These two vials served as the measure of the concentration (activity) of the added radioactive carbon material. Temperature, pH, inorganic carbon, and salinity were measured at the time of setup.

Samples were counted in a Packard Tricarb, Model No. 3375 liquid scintillation counter. Raw data in counts per minute were corrected for internal count absorption (quenching), using channels ratio procedures. These corrected counts were converted to production rate in milligrams of carbon per liter per hour by the relationship:

$$\text{Rate} = \frac{\left(\frac{DPM_l - DPM_d}{DPM_i}\right)(C)\left(\frac{V_i}{V_f}\right)(ID)}{\text{incubation time (hours)}}$$

where

DPM_l = disintegrations per minute; light bottle

DPM_d = disintegrations per minute; dark bottle

DPM_i = disintegrations per minute; inoculated

C = carbon available as ppm inorganic carbon

V_i = volume inoculated in ml

V_f = volume filtered in ml

ID = isotope descrimination factor (1.05).

4.3.2.2.2 Pigments

The pigments measured in this study were chlorophyll *a*, *b*, *c*, phycoerythrin, and pheophytin *a*. Chlorophyll *a* is present in all algal divisions, chlorophyll *b* in green algae and euglenoids, and chlorophyll *c* in diatoms, pyrophytes, and cryptophyte algae. Phycoerythrins are present in blue-green, red, and cryptophyte algae.

Three aliquots of water from each sample were filtered through glass-fiber filter pads. The filter pads were placed in a dessicator and frozen until analyzed.

In the laboratory, the filters were thawed and macerated in acetone (for chlorophylls *a*, *b*, and *c*) or 0.1 M phosphate buffer (for phycoerythrin). The chlorophyll *c* sample is then phased in hexane (Parsons 1963). After clearing, the extracts were made to a final volume of 10 ml with either 90 percent acetone or phosphate buffer as determined by the maceration solution.

The fluorescence of the acetone extracts was read and recorded for each of three colored glass filter combinations in a Turner Model 111 fluorometer. The acetone extracts were then acidified and after a 2-3-minute delay, were reread in the fluorometer for the three filter combinations. The phosphate extract was read on the fluorometer but with a different filter combination. The concentrations of pigments were calculated by the method of Loftus and Carpenter (1971) and Moreth and Yentsch (1970).

4.3.2.2.3 Adenosine Triphosphate (ATP)

The measurement of ATP level is an indication of viable biomass in that ATP is present only in living cells and is not in dead cells or associated with detrital material.

From each mixed sample, 1 liter of water was screened through a No. 363 net (pore size = 363 μ) to remove large zooplankton. Four 200-ml aliquots of the screened sample were passed through glass-fiber filters at a vacuum pressure of less than 5 psi. The filters were immersed into a vial of boiling TRIS (115 C) for 5 minutes to inactivate enzymes and complete ATP extraction (Holm-Hansen and Booth 1966). The vial was then capped and frozen (-20 C) until laboratory analysis.

The laboratory process involved the firefly luciferase assay as described by Chappelle et al. (1975). This procedure is done by injecting a volume of the sample into a luciferase preparation, and reading the quanta of light emitted. The instrument used to measure light emission was a Lab-Line Model 9140 ATP photometer.

4.3.2.2.4 Fluorescence Microscopy

Chlorophyll fluoresces when exposed to ultraviolet light. The intensity of the fluorescence can be used as a measure of sublethal stress (Lanza and Cairns 1972).

An aliquot of whole water was filtered through a gridded filter at less than 1 psi for microscopic evaluation. The filter was mounted in water and examined. The organisms were separated into the categories of diatoms, green algae, blue-green algae, flagellates, and others; and their live physio-

logical condition, based on the coloration of the autofluorescence of chlorophyll, was recorded. Bright red autofluorescence denoted a healthy condition; orange-pink, a semi-healthy condition; and pale yellow-green, an unhealthy condition. Dead organisms do not fluoresce and thus were not detected by this method.

4.3.2.2.5 Species Determination, Enumeration, and Biomass

From each sample, approximately 900 ml of whole water was preserved with 10 ml of Lugol's solution. From each preserved sample an aliquot is drawn through a 1.2-μ gridded filter by means of a vacuum pump operating at a suction level of 7 psi or less. Microscopic scanning of the filter after filtration determines the aliquot volume necessary to have sufficient material for later microscopic analysis. The filters were then allowed to air dry at room temperature before they were cleared and permanently mounted on microscopic slides.

Aproximately 300 algae were identified and counted per sample. Each cell was counted as a unit in the case of diatoms and other single cell forms and colonial and filamentous algae were counted as a single unit per colony or filament. Only those cells, colonies, or filaments that appeared to have normally shaped and located chromatophores, or coloration in the case of blue-green algae, were counted.

The number of species units per liter was calculated by the following formula:

$$S_u = \frac{U}{V_a} \qquad (4.3\text{-}1)$$

where

S_u = total species units per liter

U = total units counted

V_a = volume of water (liters) microscopically analyzed.

During the identification-counting procedure, many algal specimens were measured in order to determine biovolume on a species basis. From these species biovolumes and available literature, the results were converted into grams-carbon by the formulae of Strickland (1972). Total biomass was obtained by summing the grams-carbon per liter for each species.

4.3.2.3 Data Analysis

Data obtained from the intake samples were compared to those at the discharge. Differences between the two stations were tested for significance at the $\alpha = 0.10$ level.

Two statistical testing procedures were employed. Student's t-test was applied to the parameters listed in Table 4.3-1. Results of the fluorescence microscopy were used to determine the percentage of healthy organisms in the samples. The equality of percentages at the intake and discharge stations was tested as described in Section 16.6 of Sokal and Rohlf (1969). Analyses conducted with this statistical test are shown in Table 4.3-2. Only those taxonomic groups of algae having a total number equal to or greater than 20 organisms at both the intake and discharge were tested. All parameters studied were evaluated statistically for each of six seasons (Table 4.3-3) and on an annual basis for both initial and latent effects. Sufficient data were available from ATP and fluorescence microscopy analysis to statistically test these parameters on individual sampling dates.

TABLE 4.3-1 STATISTICAL COMPARISONS MADE WITH THE STUDENT'S t-TEST AT THE BOWLINE POINT PLANT, 1976

Parameter Studied	Period of Evaluation		
	Date	Season	Year
C-14		X Y	X Y
ATP	X Y		X Y
Density		X	X
Biomass		X	X
Fluorescence Density		X Y	X Y
Chlorophyll a		X Y	
Chlorophyll b		X Y	
Chlorophyll c		X Y	
Phycoerythrin		X Y	

Note: X = initial study data.
Y = latent study data.

TABLE 4.3-2 FLUORESCENCE MICROSCOPY DATA TESTED FOR EQUALITY OF TWO PERCENTAGES AT THE BOWLINE POINT PLANT, 1976[a]

Percent Healthy	Date	Year
Diatoms	X Y	X Y
Green algae	X Y	X Y
Blue-green algae	X Y	X Y
Flagellates	X Y	X Y
Others	X Y	X Y
Total	X Y	X Y

(a) $\alpha = 0.05$

Note: X = initial study area.
Y = latent study area.

TABLE 4.3-3 SEASONAL GROUPING OF SAMPLING DATES AND ASSOCIATED AMBIENT AND DISCHARGE TEMPERATURES OBSERVED AT THE BOWLINE POINT PLANT FOR PHYTOPLANKTON STUDIES, 1976

Season	Dates	Temperature (C)		
		Ambient	Discharge	ΔT
I	15 APR	10.4	17.4	7.0
	29 APR	11.0	20.5	9.5
II	13 MAY	15.3	24.9	9.6
	27 MAY	16.1	26.1	10.0
	10 JUN	19.1	29.2	10.1
III	24 JUN	23.2	32.9	9.7
	8 JUL	25.3	32.2	6.9
IV	22 JUL	25.2	25.5	0.3
	16 SEP	22.8	22.9	0.1
V	30 SEP	19.6	28.1	8.5
	14 OCT	17.4	28.1	10.7
VI	28 OCT	11.0	20.7	9.7
	4 NOV	9.4	19.9	10.5
	18 NOV	6.8	19.4	12.6

4.3.3 Results

Variances were high for most of the parameters measured. Tests of significance of the difference between intake and discharge samples were most sensitive for ATP and fluorescence microscopy data (i.e., smaller percentage differences could be detected than for the other parameters). The ATP and fluorescence microscopy data for the intake and discharge samples have been compared for each sampling date as well as for each season.

4.3.3.1 Phytoplankton Density and Biomass

Density and biomass data for initial intake and discharge samples are presented in Table 4.3-4. Sample dates were grouped according to similarity of discharge temperatures, as discussed in Subsection 4.3.2.3. Discharge density and biomass estimates were generally lower than respective intake estimates. A significant reduction ($\alpha = 0.10$) was obtained only on one occasion, however, when discharge temperature was minimal.

Peak algal densities occurred during the period from May to June during the rapidly rising spring temperatures. Biomass trends closely resembled the density patterns observed.

4.3.3.2 Species Community Composition

As a by-product of the fluorescence microscopy study, community composition data were assembled for 1976 (Table 4.3-5). Diatoms were the dominant algal division except during July and September, when flagellates and/or unidentifiables increased in relative abundance. Generally, greens, blue-greens, and flagellates were minor elements of the phytoplankton community.

TABLE 4.3-4 TOTAL PHYTOPLANKTON DENSITY AND BIOMASS AT BOWLINE POINT PLANT INTAKE AND DISCHARGE, 1976

Date	Temperature (C)			Density (1,000/liter)			Biomass (ug C/liter)		
	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
15 APR	10.4	17.4	7.0	357.2	277.3*	- 22.4	19.55	18.00	-8.2
29 APR	11.0	20.5	9.5						
13 MAY	15.3	24.9	9.6	7,119.5	6,211.5	-12.8	280.25	241.85	-13.7
27 MAY	16.1	26.1	10.0						
10 JUN	19.1	29.2	10.1						
24 JUN	23.2	32.9	9.8	5,282.5	3,840.0	-27.3	230.18	325.78	41.5
8 JUL	25.3	32.2	6.9						
22 JUL	25.2	25.5	0.2	3,687.4	2,740.0	-25.7	117.9	117.6	-0.2
16 SEP	22.8	22.9	0.2						
30 SEP	19.6	28.1	8.5	3,009.7	2,046.6	-32.0	159.80	126.82	-20.0
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	3,027.6	2,547.7	-15.8	224.08	215.60	-3.4
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						

Note: * indicates significant at the $\alpha = 0.10$ level.

TABLE 4.3-5 PERCENTAGE COMPOSITION OF THE ALGAL DIVISIONS IN THE COMMUNITY STRUCTURE AT THE BOWINE POINT PLANT AS DETERMINED BY FLUORESCENCE MICROSCOPY, 1976

	29 APR		13 MAY		27 MAY		10 JUN		24 JUN		8 JUL	
	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
	Initial Samples											
Diatoms	48.1	54.2	62.8	81.6	61.0	63.9	60.5	66.1	54.2	47.7	13.8	14.3
Green algae											3.3	4.5
Blue-green algae											0.2	0.3
Flagellates											44.9	37.9
Others	51.9	45.8	37.2	18.4	39.0	36.1	39.5	33.9	45.8	52.3	37.8	43.0
	Latent Samples											
Diatoms	44.2	50.6	73.0	78.6	60.9	58.2	65.7	68.6	58.4	54.8	10.9	12.0
Green algae											2.0	3.3
Blue-green algae											0.6	0.1
Flagellates											11.1	5.2
Others	55.8	49.4	27.0	21.4	39.0	41.8	34.3	31.4	41.6	45.2	75.3	79.4

	22 JUL		16 SEP		30 SEP		14 OCT		28 OCT		4 NOV		18 NOV	
	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
	Initial Samples													
Diatoms	16.3	29.1	17.7	30.6	33.6	39.2	66.3	57.1	78.8	77.3	53.7	56.4	8.9	12.7
Green algae	16.6	3.2	0.6	0.5	2.4	1.2	3.4	5.0	7.5	1.7	2.1	1.3	1.2	0.8
Blue-green algae	3.9	2.8	0.3	0.4	0.3	0.4	0.0	0.3	0.6	0.7	0.2	0.8	0.0	0.1
Flagellates	14.6	8.0	19.7	6.5	7.4	6.3	4.7	3.5	9.6	11.3	19.4	20.2	16.7	18.4
Others	48.5	56.9	61.7	62.0	56.2	52.8	25.6	34.0	7.5	9.0	24.7	21.3	73.2	67.9
	Latent Samples													
Diatoms	65.0	62.4	23.9	28.4	29.0	37.0	74.4	67.6	79.6	82.8	65.6	61.3	28.8	34.7
Green algae	4.1	4.4	1.2	1.1	2.3	1.2	2.7	3.3	3.7	2.4	2.0	2.4	1.0	2.1
Blue-green algae	2.4	3.5	0.2	0.5	0.5	0.0	1.0	0.4	0.8	0.3	0.0	0.1	0.0	0.1
Flagellates	3.0	4.7	26.7	13.0	16.1	8.7	3.0	5.4	9.5	6.9	20.7	18.3	10.1	9.0
Others	25.4	25.0	47.8	56.9	52.1	53.0	18.8	23.2	6.4	7.6	11.6	17.9	60.1	54.1

Note: Blanks indicate data not analyzed (lumped with "Others").

No differences in community structure were observed between intake and discharge samples. Both the dominant forms and the percent composition of the major taxa were similar at the intake and discharge during each season. The annual species list indicates that 123 taxa of algae were observed in the study, with 75 species observed in both the intake and discharge samples (Table 4.3-6).

4.3.3.3 Primary Productivity

4.3.3.3.1 Carbon 14 Uptake

Primary productivity rates calculated from carbon 14 uptake data for initial and latent intake and discharge samples are reported in Table 4.3-7. The observed rates were generally correlated to density and biomass patterns.

Intake-discharge comparisons revealed reductions in primary productivity rates in discharge samples during summer months. Discharge rates were equivalent to or slightly greater than intake rates during spring and fall. Similar trends were observed in both initial and latent samples. The discharge rates were not significantly different from intake rates for any study period.

4.3.3.3.2 Assimilation Numbers

Rates of carbon assimilation per unit of chlorophyll (assimilation number) for initial and latent intake and discharge samples are reported in Table 4.3-8. Trends generally followed those observed for the primary productivity rates.

No significant differences between intake and discharge assimilation numbers were observed.

TABLE 4.3-6 BOWLINE POINT PLANT PHYTOPLANKTON SPECIES LIST, 1976

	Intake	Discharge
Blue-Green Algae		
Anabaena spp.		X
Aphanizomenon flos-aquae (L.) Ralfs		X
Oscillatoria spp.	X	
Cyanophyta colony	X	X
Cyanophyta trichome	X	X
Green Algae		
Actinastrum hantzschii Lagerh.	X	X
Ankistrodesmus falcatus (Corda) Ralfs	X	X
Chodatella spp.	X	X
Closteropsis longissima Lemm.	X	
Closterium spp.		X
Crucigenia irregularis Wille	X	X
Crucigenia quadrata Morren	X	X
Crucigenia tetrapedia (Kirch.) West and West	X	X
Crucigenia spp.	X	
Eudorina spp.	X	X
Kirchneriella obesa (W. West) Schmidle	X	X
Mougeotia spp.		X
Pandorina spp.		X
Pediastrum biradiatum Meyen.	X	X
Pediastrum boryanum (Turp.) Menegh.	X	
Pediastrum duplex Meyen.	X	X
Pediastrum simplex (Meyen.) Lemm.	X	X
Scenedesmus acuminatus (Lagerh.) Chod.		X
Scenedesmus arcuatus Lemm.	X	X
Scenedesmus bijuga (Turp.) Lagerh.	X	X
Scenedesmus dimorphus (Turp.) Kuetz.	X	X
Scenedesmus quadricauda (Turp.) Breb.	X	X
Scenedesmus spp.	X	X
Selenastrum spp.	X	X
Sphaerocystis schroeteri Chod.		X
Tetraedron muticum (A. Braun) Hansg.	X	
Tetraedron trigonum (Nag.) Hansg.	X	X
Tetrastrum spp.		X
Chlorophyta filament	X	X
Cryptomonads		
Unidentified cryptomonads	X	X
Chrysomonads		
Mallomonas spp.	X	

TABLE 4.3-6 (CONT.)

	Intake	Discharge
Diatoms		
Amphora ovalis Kuetz.	X	
Asterionella formosa Hass.	X	X
Chaetoceros spp.	X	X
Coscinodiscus excentricus Ehr.	X	X
Coscinodiscus rothii (Ehr.) Grun.	X	X
Coscinodiscus (perforated type)	X	X
Coscinodiscus spp.		X
Cyclotella aliquantula Hohn and Hellerman	X	X
Cyclotella atomus Hust.	X	X
Cyclotella comta (Ehr.) Kuetz.	X	X
Cyclotella glomerata Bach.	X	X
Cyclotella meneghiniana Kuetz.	X	X
Cyclotella ocellata Pant.	X	X
Cyclotella pseudostelligera Hust.	X	
Cyclotella stelligera Cl. and Grun.	X	X
Cyclotella striata (Kuetz.) Grun.	X	X
Diatoma vulgare Bory.	X	
Diploneis puella (Schum.) Cl.		X
Diploneis smithii (Breb. ex. W. Sm.) Cl.	X	X
Entomoneis paludosa (W. Sm.) Reim.		X
Fragilaria construens (Ehr.) Grun.		X
Fragilaria crotonensis Kitton	X	
Fragilaria spp.	X	
Gyrosigma wormleyi (Sulliv.) Boyer	X	X
Melosira ambigua (Grun.) Muell.	X	X
Melosira ambigua var.?	X	X
Melosira granulata (Ehr.) Ralfs	X	X
Melosira granulata var. angustissima O. Muell.	X	
Melosira italica (Ehr.) Kuetz.	X	X
Melosira italica var. tennuissima (Grun.) O. Muell.	X	X
Melosira varians Ag.	X	
Meridion circulare (Greg.) Ag.	X	
Navicula capitata Ehr.	X	X
Navicula cryptocephala Kuetz.	X	X
Navicula peregrina (Ehr.) Kuetz.		X
Navicula rhynochocephalus var. germainii (Wall.) Patr.	X	X
Navicula viridula (Kutz.)		X
Navicula spp.	X	
Nitzschia acicularis W. Sm.	X	X
Nitzschia capitellata Hust.	X	X
Nitzschia closterium (Ehr.) W. Sm.	X	
Nitzschia dissipata (Kuetz) Grun.	X	X
Nitzschia dissipata var. media Hantz.		X
Nitzschia fonticola Grun.	X	X
Nitzschia holsatica Hust.	X	X
Nitzschia kuetzingiana Hilse.	X	X
Nitzschia palea (Kuetz.) W. Sm.	X	X

TABLE 4.3-6 (CONT.)

	Intake	Discharge
Diatoms (Cont.)		
Nitzschia paleacea Grun.	X	
Nitzschia sigma (Kuetz.) W. Sm.	X	X
Nitzschia sigmoidea (Ehr.) W. Sm.		X
Nitzschia tryblionella var. *debilis* (Arn.) A. Mayer.	X	X
Nitzschia tryblionella var. *levidensis* (W. Sm.) Grun.		X
Nitzschia tryblionella var. *victoriae* Grun.	X	X
Nitzschia spp.	X	X
Rhoicosphenia curvata (Kuetz.) Grun. ex. Rabh.	X	
Stephanodiscus astraea (Ehr.) Grun.	X	X
Stephanodiscus astraea var. *minutula* (Kuetz.) Grun.	X	X
Stephanodiscus hantzschii Grun.	X	
Stephanodiscus invisitatus Hohn and Hellerman	X	X
Stephanodiscus spp.		X
Surirella ovata Kuetz.	X	X
Surirella tenera Greg.	X	
Synedra pulchella Ralfs ex. Kuetz.		X
Synedra rumpens Kuetz.	X	X
Synedra rumpens var. *scotica* Grun.		
Synedra ulna (Nitz.) Ehr.	X	X
Synedra ulna vars.		X
Thalassionema spp.	X	X
Thalassiosira fluviatilis Hust.	X	X
Thalassiosira gessneri Hust.	X	X
Thalassiosira spp.	X	X
Unidentified diatom	X	
Unidentified centric diatom		X
Dinoflagellates		
Unidentified dinoflagellates	X	X
Euglenoids		
Euglenoid form	X	
Others		
Unidentified coccoid	X	X
Unidentified coccoid, large	X	X
Unidentified colony of two cells	X	X
Unidentified colony of four cells	X	X
Unidentified colony of six cells		X
Unidentified colony of eight cells	X	X
Unidentified colony of ten cells	X	X
Unidentified colony of ten or more cells	X	X
Unidentified form	X	X
Unidentified flagellates <10 U	X	X
Unidentified flagellates >10 U	X	X

TABLE 4.3-7 PRIMARY PRODUCTIVITY RATES (mg C/liter/hr) AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE AS DETERMINED BY CARBON-14 UPTAKE, 1976

	Temperature (C)			Initial			Latent		
Date	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
15 APR	10.4	17.4	7.0	0.001	0.002	50.0	0.0015	0.0020	33.3
29 APR	11.0	20.5	9.5						
13 MAY	15.3	24.9	9.6	0.068	0.051	-12.1	0.100	0.069	-31.0
27 MAY	16.1	26.1	10.0						
10 JUN	19.1	29.2	10.1						
24 JUN	23.2	32.9	9.8	0.073	0.058	-20.5	0.086	0.060	-30.2
8 JUL	25.3	32.2	6.9						
22 JUL	25.2	25.5	0.2	0.052	0.042	-19.2	0.087	0.065	-25.3
16 SEP	22.8	22.9	0.2						
30 SEP	19.6	28.1	8.5	0.025	0.028	12.0	0.028	0.021	-25.0
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	0.023	0.021	-8.7	0.019	0.015	-21.0
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						

Note: * indicates significant at the $\alpha = 0.10$ level.

TABLE 4.3-8 ASSIMILATION NUMBERS (mg C/mg Chl a/hr.) AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE, 1976

	Temperature (C)			Initial			Latent		
1976	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
15 APR	10.4	17.4	7.0						
29 APR	11.0	20.5	9.5						
13 MAY	15.3	24.9	9.6						
27 MAY	16.1	26.1	10.0						
10 JUN	19.1	29.2	10.1						
24 JUN	23.2	32.9	9.8						
8 JUL	25.3	32.2	6.9						
22 JUL	25.2	25.5	0.2						
16 SEP	22.8	22.9	0.2	4.22	3.08	-27.0	6.88	5.29	-23.1
30 SEP	19.6	28.1	8.5	2.80	3.69	31.8	2.78	2.57	-7.6
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	3.54	3.36	-5.1	3.10	2.35	-24.2
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						

Nonsignificant reductions and/or increase in assimilation numbers of discharge samples appeared to be unrelated to discharge temperature.

4.3.3.4 Pigments

Initial discharge levels of chlorophylls a, b, and c, and phycoerythrin were generally less than respective intake levels (Tables 4.3-9, 4.3-10). This trend was not nearly as apparent in the latent samples. Of the observed reductions, five were significant, with all occurring during the summer period when no thermal load was present. Thus, there was no relationship between discharge temperatures and pigment concentrations.

4.3.3.5 Adenosine Triphosphate (ATP)

ATP levels for initial and latent intake and discharge samples are reported in Table 4.3-11. The availability of eight replicates per sample eliminated the need to combine sample dates to increase statistical sensitivity. Thus, ATP data are presented on a per sample date basis.

ATP levels were highest during late spring and summer. Latent ATP levels were generally higher than initial levels. Intake-discharge comparisons showed significant reductions in the discharge samples on 9 of the 14 dates in the initial samples, and on 6 dates in the latent samples. Two significant increases were observed in the initial discharge samples, and none in the latent. Thus the general trend was a reduction in discharge levels. These reductions occurred independently of discharge temperatures, and in fact occurred throughout the July-September period when the condenser circulation system was operating with no increase in temperature.

TABLE 4.3-9 CHLOROPHYLL a CONCENTRATIONS (ug/liter) AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE, 1976

Date	Temperature (C)			Initial			Latent		
	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
15 APR	10.4	17.4	7.0						
29 APR	11.0	20.5	9.5						
13 MAY	15.3	24.9	9.6						
27 MAY	16.1	26.1	10.0						
10 JUN	19.1	29.2	10.1						
24 JUN	23.2	32.9	9.8						
8 JUL	25.3	32.2	6.9						
22 JUL	25.2	25.5	0.2						
16 SEP	22.8	22.9	0.2	7.81	4.55	-41.7	6.25	3.97*	-36.5
30 SEP	19.6	28.1	8.5	8.93	7.59	-15.0	10.1	8.14	-19.3
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	6.50	6.25	-3.8	6.13	6.38	4.1
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						

Note: * indicates significant at the $\alpha = 0.10$ level.

TABLE 4.3-10 CHLOROPHYLLS b and c AND PHYCOERYTHRIN CONCENTRATIONS (µg/liter) AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE, 1976

	Temperature (C)			Initial			Latent		
Chlorophyll b	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
22 JUL	25.2	25.5	0.2						
16 SEP	22.8	22.9	0.2	3.26	1.63*	-50.0	2.49	1.22*	-51.0
30 SEP	19.6	28.1	8.5	1.77	1.47	-16.9	1.95	0.56	71.3
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	0.00	0.00	0.0	0.00	0.00	0.0
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						
Chlorophyll c									
22 JUL	25.2	25.5	0.2	1.42	0.89*	-37.3	1.84	1.52	-17.4
16 SEP	22.8	22.9	0.2						
30 SEP	19.6	28.1	8.5	2.61	2.61	0.0	3.68	2.97	-19.3
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	4.24	3.77	-11.1	2.94	4.63	57.5
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						
Phycoerythrin									
22 JUL	25.2	25.5	0.2						
16 SEP	22.8	22.9	0.2	1.95	2.20	12.8	1.70	4.35	155.9
30 SEP	19.6	28.1	8.5	2.12	1.85	-12.9	2.95	2.12	-28.0
14 OCT	17.4	28.1	10.7						
28 OCT	11.0	20.7	9.7	1.57	1.43	-8.9	1.05	1.65	57.1
4 NOV	9.4	19.9	10.4						
18 NOV	6.8	19.4	12.6						

Note: * indicates significant at the $\alpha = 0.10$ level.

TABLE 4.3-11 ADENOSINE TRIPHOSPHATE LEVELS (µg/liter) AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE, 1976

	Temperature (C)			Initial			Latent		
Date	Ambient	Discharge	ΔT	Intake	Discharge	% Change	Intake	Discharge	% Change
15 APR	10.4	17.4	7.0	0.071	0.101*	42.2	0.060	0.060	0.0
29 APR	11.0	20.5	9.5	0.054	0.047	-12.8	0.098	0.096	-2.0
13 MAY	15.3	24.9	9.6	0.322	0.369	14.6	0.809	0.416*	-48.6
27 MAY	16.1	26.1	10.0	0.173	0.258	48.7	0.516	0.452	-12.4
10 JUN	19.1	29.2	10.1	0.265	0.198*	-25.0	0.822	0.719	-12.5
24 JUN	23.2	32.9	9.8	1.347	0.964*	-28.4	1.653	1.406	-14.9
8 JUL	25.3	32.2	6.9	0.184	0.062*	-66.3	1.017	0.312*	-69.3
22 JUL	25.2	25.5	0.2	0.420	0.099*	-38.2	2.832	1.908*	-32.6
16 SEP	22.8	22.9	0.2	0.458	0.109*	-76.2	0.802	0.330*	-58.8
30 SEP	19.6	28.1	8.5	0.064	0.035*	-45.3	0.514	0.230*	-55.2
14 OCT	17.4	28.1	10.7	0.239	0.143*	-40.4	0.792	0.361*	-54.4
28 OCT	11.0	20.7	9.7	0.358	0.283*	-20.7	0.402	0.526	30.9
4 NOV	9.4	19.9	10.4	0.316	0.171*	-45.9	0.356	0.377	5.9
18 NOV	6.8	19.4	12.6	0.074	0.215*	190.5	0.144	0.180	25.3

Note: * indicates signficant at the $\alpha = 0.10$ level.

4.3.3.6 Fluorescence Microscopy

A comparison of the percentage of healthy organisms in intake and discharge samples is presented by taxonomic group in Table 4.3-12 for initial and latent samples, respectively. From 15 April to 24 June 1976, data for greens, blue-greens, and flagellates were combined into the "Others" category.

Examination of the initial data reveals that in 21 cases, significant differences were observed between intake and discharge percentage healthy data, 18 of which were reductions. In general, the highest values of percentage of healthy organisms were obtained in spring samples, with values consistently in the 80-90 percentile group both in intake and discharge samples. Percentage healthy values fell through the summer months to minimal levels in September and November.

Significant reductions appeared not to be correlated to discharge temperatures in the initial samples. Although 8 of 18 significant reductions occurred at temperatures above 29 C, numerous reductions occurred over a wide range of discharge temperatures. In fact, four reductions occurred on dates when discharge temperatures were equivalent to intake values, due to a plant outage.

General trends observed in the latent data were similar to those discussed above. Specifically, 28 significant differences were detected between intake and discharge percentage healthy values, only 16 of which were reductions. The majority of the 12 significant increases occurred at discharge temperatures below 25 C during spring and fall, and two increases occurred at maximum discharge temperatures. Significant reductions occurred over a wide range of discharge temperatures.

TABLE 4.3-12 PERCENTAGE OF HEALTHY ORGANISMS IN THE ALGAL DIVISIONS OF THE COMMUNITY STRUCTURE AT THE BOWLINE POINT PLANT INTAKE AND DISCHARGE AS DETERMINED BY FLUORESCENCE MICROSCOPY, 1976

Initial Sample

	15 APR				29 APR				13 MAY				27 MAY			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%(a)	n(b)	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms					86.5	167	89.4	168	93.5	1,043	94.2	1,152	90.8	1,012	88.6	863
Greens																
Blue-greens																
Flagellates					84.6	176	70.4*	112	95.0	629	93.8	259	67.7	483	64.9	357
Others					85.5	343	80.7	280	94.0	1,672	94.1	1,411	81.8	1,495	80.1	1,220
Total	80.6	361	75.5	351												

	10 JUN				24 JUN				8 JUL				22 JUL			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms	91.2	1,222	91.6	793	93.8	573	92.0	405	75.2	85	81.8	81	85.5	100	79.3	142
Greens									96.3	25	54.8*	17	76.5	91	85.0	17
Blue-greens									0.0	0	100.0	2	67.8	19	58.8	10
Flagellates									78.7	289	53.4*	140	70.8	75	71.4	35
Others	86.8	760	77.7*	345	77.8	402	65.4*	315	70.9	219	58.2*	173	54.0	188	61.7*	216
Total	89.5	1,982	86.9	1,138	86.4	975	78.1*	720	75.6	618	59.8*	413	65.9	473	68.3	420

	16 SEP				30 SEP				14 OCT				28 OCT			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms	76.3	103	67.9	167	45.1	102	42.2	145	83.6	392	83.3	418	85.8	521	64.6*	350
Greens	100.0	5	50.0	2	56.3	9	54.5	6	62.5	15	56.8	25	69.2	18	75.0	9
Blue-greens	0.0	0	0.0	0	0.0	0	20.0	1	--	0	33.3	1	60.0	3	60.0	3
Flagellates	28.0	42	65.4*	34	40.0	20	41.8	23	15.2	5	19.4	6	20.3	15	7.6*	6
Others	47.4	223	29.5*	147	22.0	83	10.6*	49	13.8	25	11.4	34	51.7	30	25.4*	16
Total	49.0	373	43.6*	350	31.8	214	25.5*	224	61.8	437	55.1*	484	76.2	587	54.8*	384

	4 NOV				18 NOV			
	Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n
Diatoms	96.1	320	84.5	404	81.8	54	84.8	78
Greens	84.6	11	63.6	7	88.9	8	50.0	3
Blue-greens	0.0	0	14.3	1	--	0	0.0	0
Flagellates	20.0	24	26.3	45	3.2	4	4.5	6
Others	12.4	19	7.7	14	5.7	31	6.3	31
Total	60.3	374	55.5	471	13.0	97	16.3	118

(a) % = percentage healthy.
(b) n = number healthy.

Note: * indicates significant at the $\alpha = 0.05$ level.
Blanks indicate data not analyzed (lumped together with "Others").
Dashes indicate no organisms observed.

TABLE 4.3-12 (CONT.)

Latent Sample

	15 APR				29 APR				13 MAY				27 MAY			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%(a)	n(b)	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms					88.4	213	91.9	499	90.2	1,612	91.7	1,905	83.9	682	86.9	522
Greens																
Blue-greens																
Flagellates																
Others					77.0	234	88.9*	472	79.8	528	88.6*	500	79.5	414	79.9	344
Total	80.6	391	80.1	422	82.0	447	90.4*	97.1	87.4	2,740	91.1*	2,405	82.7	1,096	83.9	866

	10 JUN				24 JUN				8 JUL				22 JUL			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms	94.1	907	92.2	1,956	88.3	637	94.2*	807	89.4	127	70.6*	84	91.9	395	87.8*	440
Greens									96.2	25	91.2	31	88.9	24	85.7	30
Blue-greens									100.0	8	0.0	0	75.0	12	85.7	24
Flagellates									85.4	123	80.4	41	90.0	18	78.9	30
Others	89.3	450	85.0*	825	73.3	376	74.1	524	84.3	824	64.3*	504	90.5	152	68.6*	138
Total	92.4	1,357	86.7*	2,681	82.1	1,013	85.1*	1,331	85.4	1,107	66.7*	660	90.9	601	82.4*	662

	16 SEP				30 SEP				14 OCT				28 OCT			
	Intake		Discharge		Intake		Discharge		Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Diatoms	74.0	141	76.4	172	26.5	61	23.4	83	82.8	646	88.8*	533	76.5	540	80.6	722
Greens	0.0	0	22.2	2	33.3	6	25.0	3	75.0	21	55.2	16	72.7	24	65.4	17
Blue-greens	0.0	0	0.0	0	0.0	0	--	0	63.6	7	75.0	3	57.1	4	66.7	2
Flagellates	4.7	10	5.8	6	26.6	34	18.1	15	21.9	7	45.8*	22	25.0	21	8.0*	6
Others	18.7	71	18.4	83	15.5	64	7.3*	37	11.7	23	15.0	31	43.8	25	22.0*	18
Total	28.0	222	33.2*	263	20.8	165	14.4*	138	67.2	704	68.2	605	69.2	614	70.7	765

	4 NOV				18 NOV			
	Intake		Discharge		Intake		Discharge	
	%	n	%	n	%	n	%	n
Diatoms	87.8	604	76.0*	500	84.6	171	91.2*	260
Greens	55.0	11	57.7	15	57.1	4	58.8	10
Blue-greens	--	0	0.0	0	--	0	0.0	0
Flagellates	36.1	73	14.2*	28	11.3	8	12.2	9
Others	6.2	7	1.0*	2	14.0	59	11.5	51
Total	71.4	695	50.7*	545	34.5	242	40.2*	330

(a) % = percentage healthy.
(b) n = number healthy.

Note: * indicates significant at the $\alpha = 0.05$ level.
Blanks indicate data not analyzed (lumped together with "Others").
Dashes indicate no organisms observed.

Of the various algal divisions, diatoms were characterized by the highest percentage healthy values in both initial and latent samples. Values only occasionally dropped below the 80 percentile mark in intake or discharge samples. Percentage healthy values of greens generally were lower than those of diatoms, but exceeded those of flagellates and blue-greens. Low blue-green densities frequently made the detection of differences between intake and discharge samples impossible.

4.3.4 Summary

The occurrence of significant differences between intake and discharge samples was unrelated to discharge temperatures for all parameters studied. No significant differences were detected for primary productivity rates, fluorescence densities, and biomass. The reduction in density noted in April is probably attributable to plankton patchiness. The only significant reductions noted for pigment levels occurred during the period of no thermal load. While ATP levels were generally lower in the discharge samples, the occurrences of significant reductions could not be correlated to discharge temperatures.

The initial and latent discharge percentage healthy results were similar. Numerous significant reductions were observed for the various algal divisions but all appeared unrelated to discharge temperatures. Diatoms and green algae maintained the highest percentage healthy values in both initial and latent samples.

REFERENCES: SECTION 4.3

Chapelle, E. W., G. L. Picciolo, C. A. Curtis, E. A. Knust, D. A. Nibley, R. B. Vance. 1975. Laboratory procedures manual for the firefly luciferase assay for adenosine triphosphate (ATP). X-726-75-1 Goddard Space Flight Center, Greenbelt, Maryland. 121 pp.

Holm-Hansen, O. and C. R. Booth. 1966. The measurement of adenosine triphosphate in the ocean and its ecological significance. Limnol. & Oceanogr. 11:510-519.

Lanza, G. R. and J. Cairns, Jr. 1972. Physio-morphological effects of abrupt thermal stress on diatoms. Trans. Amer. Micros. Soc. 19(3):276-298.

Loftus, M. E. and J. H. Carpenter. 1971. A fluorometric method for determining chlorophylls a, b, and c. J. Mar. Res. 29(3): 319-338.

Moreth, C. M. and C. S. Yentsch. 1970. A sensitive method for the determination of open ocean phytoplankton phycoerythrin pigments by fluorescence. Limnol. & Oceanogr. 15(2): 313-317.

Parsons, T. R. 1963. A new method for the microdetermination of chlorophyll c in seawater. J. Mar. Res. 21:165-171.

Sokal, R. B. and F. J. Rohlf. 1969. Biometry. The principles and practice of statistics in biological research. W. H. Freeman and Company, San Francisco, Calif.

Strickland, J. D. H. 1972. Research on the marine planktonic food web at the institute of marine resources: A review of the past seven years of work.

CHAPTER 5: ENTRAINMENT ABUNDANCE

5.1 ICHTHYOPLANKTON

5.1.1 Introduction

During 1976, studies were undertaken at the Bowline Point Generating Station to characterize the ichthyoplankton subject to entrainment by the plant circulating water system. These studies were a continuation of earlier work performed by Lawler, Matusky & Skelly, Engineers (1974, 1975) and Ecological Analysts, Inc. (1976) and were designed to determine the densities, species and life-stage composition, and length-frequencies of entrainable fish at the plant intake. Special emphasis was placed on striped bass, white perch, Atlantic tomcod, bay anchovy, and species of the family Clupeidae.

Abundance sampling was conducted during one 24-hour period each week between 4 February and 14 September to provide data for all the major spawning seasons in the Hudson River. Diel variations in entrainment abundance were examined by sampling at approximately noon, sunset, midnight, and sunrise during each 24-hour sampling period. The vertical distribution of organisms in the water column next to the intake structure was also examined by sampling at surface, middle, and bottom depths. Flow velocities of water passing through the nets were continuously monitored and used to calculate sample volume.

Supplementary studies to evaluate alternative equipment and designs for entrainment abundance sampling were also performed during the 1976 sampling season. These surveys included the use of a pump system designed to sample three depths simultaneously at the plant intake and a pump sampling apparatus

at the Unit 1 discharge. The discharge abundance study will be addressed in a separate report.

5.1.2 Methods and Materials

5.1.2.1 Net Collections

Simultaneous sampling of surface, middle, and bottom depths was accomplished using three 0.5-m, 505-μ mesh conical plankton nets which, after having been secured to a rigid mounting frame, were lowered parallel to and in front of the Unit 1 trash racks. Two consecutive 30-minute samples were collected at each of the four times of day (i.e., noon, sunset, midnight, sunrise). At the completion of each 30-minute collection period the nets were thoroughly rinsed into a cylindrical cod-end container located at the apex of the net. The concentrated sample was then promptly transferred to a labeled 800-ml glass jar and preserved with 10 percent formalin. Flow velocities were measured continuously throughout the sample duration with an electronic flowmeter (Cushing) centered at the mouth of one net, and connected to a deck read-out unit. Each of the remaining two nets was fitted with an impeller-driven General Oceanics flowmeter. The electromagnetic and impeller-driven flowmeters were exchanged before each 30-minute sample on a rotating schedule basis. Each depth was therefore sampled at least once by the electromagnetic flowmeter during each 24-hour sampling period. Flow velocity values obtained from the electromagnetic flowmeter were used in the development of a plant intake velocity matrix (Subsection 5.1.2.4). Water quality analyses were performed during each hour of sample collection to monitor ambient water temperature, conductivity, dissolved oxygen, and pH.

5.1.2.2 Pump Collections

Pump samples were collected at the plant intake structure using a three-depth intake manifold apparatus. Three distinct 3-in. intake lines, each submerged to the specified depth (surface, middle, and bottom) converged to a single intake hose, thus yielding a three-depth composite sample. The discharge hose, equipped with an inline flowmeter, was inserted into a V-notch weir collection box, and the sample volume allowed to overflow into a plankton net identical to those previously described. Sampling with the three-depth manifold was run concurrently with net collections.

5.1.2.3 Sample Processing

All samples were preserved on site in separate 800-ml glass jars with 10 percent formalin. Once transported to the lab, the sample was transferred to a blackened Pyrex tray, sorted, and enumerated according to species and life stage. Quality control checks were made on the sorting procedure. The specimens removed from the sample were segregated into separate vials according to species and life stage and preserved with 5 percent formalin for later examination. The contents of each vial were carefully examined under a dissecting microscope fitted with an optical micrometer to positively identify the specimen and measure its length. Egg dimensions were not determined. The available literature and an ichthyoplankton reference collection were used in the identification process.

5.1.2.4 Volume Determinations

The volume of water filtered during each sample collection was used to convert raw sample numbers to organism densities. The sample volumes were determined according to the following relationship:

$$V = \pi r^2 \cdot t \cdot v$$

where

V = volume in m^3

πr^2 = net cross-sectional area in m^2

t = sample duration in minutes

v = flow velocity through nets in m/min.

The impeller-driven flowmeters (General Oceanics) were unreliable at the low approach velocities characteristic of the Bowline Point intake. Accordingly, through-net velocities measured with the electromagnetic flowmeter (Cushing) were used to develop an intake water flow velocity (cm/sec) matrix (Table 5.1-1). Electromagnetic flowmeter values were accumulated over a range of tidal and plant operating conditions for each depth sampled (i.e., surface, middle, and bottom). These values were then used to estimate volume of water filtered for each depth sampled for any given sample under any given combination of tidal and plant operating conditions according to the above relationship. The volume of the samples collected with pumps was accurately measured with an in-line flowmeter.

5.1.3 Results and Discussion

5.1.3.1 Species Composition and Abundance (Net Collections)

The total number of organisms of each species and life stage for the intake abundance collections made with the stationary plankton nets is shown in Table 5.1-2. The results indicated that larvae of the bay anchovy (Anchoa mitchilli) constituted 72.4 percent of all the ichthyoplankton obtained during the sampling year. Less than 2.5 percent of the total collection

TABLE 5.1-1 BOWLINE PLANT INTAKE THROUGH-NET VELOCITIES AS A FUNCTION OF TIDAL HEIGHT, CIRCULATOR PUMP OPERATION, AND SAMPLING DEPTH

	Intake Through-Net Velocities (cm/sec)							
	4 Pumps Full[a]				4 Pumps Throttled[a]			
Tidal Height Range (m)	(-0.5)-(-0.1)	(0.0)-(+0.3)	(+0.4)-(+0.7)	(+0.8)-(+1.1)	(-0.5)-(-0.1)	(0.0)-(+0.3)	(+0.4)-(+0.7)	(+0.8)-(+1.1)
Depth								
Surface	10.7 ± 1.4[b]	10.4 ± 2.6	10.7 ± 1.6	9.3 ± 1.4	9.0*	9.5*	7.3*	6.4*
Middle	12.8 ± 2.3	10.2 ± 1.0	12.4 ± 4.3	10.2 ± 1.3	10.9*	9.3*	8.6*	7.0*
Bottom	15.4 ± 2.3	12.8 ± 3.8	13.7 ± 1.9	10.9 ± 3.8	13.1 ± 1.1	11.6 ± 0.5	9.4 ± 1.9	7.5*

(a) Includes combinations of circulator pumps 1A, 1B, 2B, 2C; 1A, 1B, 2A, 2C; 1A, 1B, 2A, 2B.
(b) Indicates standard deviation.

Note: * indicates extrapolated values.

TABLE 5.1-2 NUMBER AND PERCENT COMPOSITION BY LIFE STAGE OF ICHTHYOPLANKTON COLLECTED BY NETS DURING ABUNDANCE SAMPLING AT THE BOWLINE POINT PLANT INTAKE, 1976

Composite of Three Depths

Species	Life Stage	Number Collected	Percent Composition
Bay anchovy	Larvae	3,892	72.4
Bay anchovy	--(a)	418	7.8
White perch	Egg	416	7.7
Bay anchovy	Yolk-sac larvae	137	2.3
Atlantic tomcod	Larvae	122	2.3
Clupeids	Larvae	44	0.8
Striped bass	Larvae	44	0.8
Bay anchovy	Egg	37	0.7
White perch	Larvae	37	0.7
Atlantic tomcod	--	32	0.6
Striped bass	Yolk-sac larvae	16	0.3
Clupeids	Yolk-sac larvae	14	0.3
Centrarchids	Larvae	11	0.2
Atlantic tomcod	Yolk-sac larvae	9	0.0
Rainbow smelt	Larvae	9	0.2
American shad	Larvae	7	0.1
Unidentified larvae	Larvae	7	0.1
Cyprinids	Yolk-sac larvae	4	0.1
White perch	Yolk-sac larvae	4	0.1
Morone spp.	Larvae	4	0.1
Hogchoker	Eggs	4	0.1
American eel	--	3	0.1
Centrarchids	Yolk-sac larvae	3	0.1
Weakfish	Larvae	3	0.1
Tessellated darter	Yolk-sac larvae	3	0.1
Menidia spp.	Larvae	3	0.1
White perch	Larvae	2	0.0
Clupeids	--	1	0.0
Cyprinids	Eggs	1	0.0
Tessellated darter	Larvae	1	0.0
Yellow perch	Larvae	1	0.0
Winter flounder	--	1	0.0
Hogchoker	Larvae	1	0.0

(a) Dashes indicate juvenile or older.

consisted of species other than bay anchovy, Atlantic tomcod (Microgadus tomcod), and clupeids.

Daily average densities observed at the Bowline Point plant intake during 1976 are presented by life stage in Table 5.1-3 for striped bass (Morone saxatilis), white perch (Morone americana), Atlantic tomcod (Microgadus tomcod), bay anchovy (Anchoa mitchilli), and clupeids. Temporal trends are more easily visualized in Figure 5.1-1, which presents average larval densities for each sampling date between 30 March and 15 September along with average intake conductivity. The 1976 net sampling effort spanned the full range of the entrainment periods for all species with the possible exception of Atlantic tomcod, which typically spawns in midwinter in the Hudson River.*

Peak abundances for Morone spp. larvae were obtained in the latter half of June, about two to three weeks later than the entrainment peaks of these larvae in 1975.

A peak larval density of 1,422.0/1,000 m^3 for A. mitchilli was measured on 27 and 28 July, but larvae of this species were still present in low numbers as late as 14 and 15 September.**

These data are useful for assessing the time of peak entrainment of each species and the approximate duration of the entrainment periods.

---

* Sampling during the early part of the season for Atlantic tomcod (4 February - 30 March) was carried out using pump collection techniques and is discussed in Subsection 5.1.3.2.

** This was the only 24-hour period sampled during this month.

TABLE 5.1-3 DAILY AVERAGE DENSITY OF FISH BY LIFE STAGE AND SAMPLE DATE FROM NET COLLECTIONS AT THE BOWLINE POINT PLANT, 1976

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
				Striped Bass				
10 FEB	0.6	130	204.1	0.0	0.0	0.0	0.0	0.0
30 MAR	7.1	130	746.4	0.0	0.0	0.0	0.0	0.0
6 APR	8.3	123	742.2	0.0	0.0	0.0	0.0	0.0
13 APR	7.8	1,575	753.3	0.0	0.0	0.0	0.0	0.0
20 APR	11.4	135	803.1	0.0	0.0	0.0	0.0	0.0
27 APR	10.8	905	868.2	0.0	0.0	0.0	0.0	0.0
4 MAY	12.7	125	819.0	0.0	0.0	0.0	0.0	0.0
11 MAY	15.7	128	715.2	0.0	8.4	0.0	0.0	8.4
18 MAY	15.8	144	780.9	0.0	3.8	0.0	0.0	3.8
25 MAY	16.4	125	737.4	0.0	2.7	0.0	0.0	2.7
1 JUN	17.4	213	726.9	0.0	0.0	0.0	0.0	0.0
8 JUN	18.9	155	825.3	0.0	0.0	0.0	0.0	0.0
15 JUN	20.8	198	801.0	0.0	6.2	22.5	0.0	28.7
22 JUN	22.6	239	608.3	0.0	0.0	21.4	0.0	21.4
30 JUN	23.8	1,643	309.9	0.0	0.0	25.8	0.0	25.8
6 JUL	25.9	205	780.3	0.0	0.0	5.1	0.0	5.1
13 JUL	24.1	246	757.5	0.0	0.0	1.3	0.0	1.3
20 JUL	26.0	805	859.2	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720	766.5	0.0	0.0	0.0	0.0	0.0
2 AUG	26.3	4,243	2,415.9	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075	732.6	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227	812.1	0.0	0.0	0.0	0.0	0.0
14 SEP	23.8	2,357	830.1	0.0	0.0	0.0	0.0	0.0

TABLE 5.1-3 (CONT.)

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
	White Perch							
10 FEB	0.6	130	204.1	0.0	0.0	0.0	0.0	0.0
30 MAR	7.1	130	746.4	0.0	0.0	0.0	0.0	0.0
6 APR	8.3	123	742.2	0.0	0.0	0.0	0.0	0.0
13 APR	7.8	1,575	753.3	0.0	0.0	0.0	0.0	0.0
20 APR	11.4	135	803.1	0.0	0.0	0.0	0.0	0.0
27 APR	10.8	905	868.2	0.0	0.0	0.0	0.0	0.0
4 MAY	12.7	125	819.0	63.5	0.0	0.0	0.0	0.0
11 MAY	15.7	128	715.2	76.9	0.0	2.8	0.0	2.8
18 MAY	15.8	144	780.9	6.4	1.3	1.3	0.0	2.6
25 MAY	16.4	125	737.4	359.4	0.0	5.4	0.0	5.4
1 JUN	17.4	213	726.9	13.8	0.0	8.3	0.0	8.3
8 JUN	18.9	155	825.3	6.1	2.4	0.0	0.0	2.4
15 JUN	20.8	198	801.0	27.5	0.0	0.0	0.0	0.0
22 JUN	22.6	239	608.3	0.0	1.6	16.4	0.0	18.1
30 JUN	23.8	1,643	309.9	6.5	0.0	19.4	0.0	19.4
6 JUL	25.9	205	780.3	0.0	0.0	5.1	0.0	5.1
13 JUL	24.1	246	757.5	0.0	0.0	5.3	0.0	5.3
20 JUL	26.0	805	859.2	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720	766.5	0.0	0.0	0.0	0.0	0.0
2 AUG	26.3	4,243	2,415.9	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075	732.6	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227	812.1	0.0	0.0	0.0	0.0	0.0
14 SEP	23.8	2,357	830.1	0.0	0.0	0.0	0.0	0.0

TABLE 5.1-3 (CONT.)

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
Atlantic Tomcod								
10 FEB	0.6	130	204.1	0.0	0.0	0.0	0.0	0.0
30 MAR	7.1	130	746.4	0.0	12.1	2.7	0.0	14.7
6 APR	8.3	123	742.2	0.0	0.0	0.0	0.0	0.0
13 APR	7.8	1,575	753.3	0.0	0.0	150.0	34.5	184.5
20 APR	11.4	135	803.1	0.0	0.0	3.7	1.2	5.0
27 APR	10.8	905	868.2	0.0	0.0	4.6	5.8	10.4
4 MAY	12.7	125	819.0	0.0	0.0	0.0	0.0	0.0
11 MAY	15.7	128	715.2	0.0	0.0	0.0	0.0	0.0
18 MAY	15.8	144	780.9	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125	737.4	0.0	0.0	0.0	0.0	0.0
1 JUN	17.4	213	726.9	0.0	0.0	0.0	0.0	0.0
8 JUN	18.9	155	825.3	0.0	0.0	0.0	0.0	0.0
15 JUN	20.8	198	801.0	0.0	0.0	0.0	0.0	0.0
22 JUN	22.6	239	608.3	0.0	0.0	0.0	0.0	0.0
30 JUN	23.8	1,643	309.9	0.0	0.0	0.0	0.0	0.0
6 JUL	25.9	205	780.3	0.0	0.0	0.0	0.0	0.0
13 JUL	24.1	246	757.5	0.0	0.0	0.0	0.0	0.0
20 JUL	26.0	805	859.2	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720	766.5	0.0	0.0	0.0	0.0	0.0
2 AUG	26.3	4,243	2,415.9	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075	732.6	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227	812.1	0.0	0.0	0.0	0.0	0.0
14 SEP	23.8	2,357	830.1	0.0	0.0	0.0	0.0	0.0

TABLE 5.1-3 (CONT.)

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
			Bay Anchovy					
10 FEB	0.6	130	204.1	0.0	0.0	0.0	0.0	0.0
30 MAR	7.1	130	746.4	0.0	0.0	0.0	0.0	0.0
6 APR	8.3	123	742.2	0.0	0.0	0.0	0.0	0.0
13 APR	7.8	1,575	753.3	0.0	0.0	0.0	0.0	0.0
20 APR	11.4	135	803.1	0.0	0.0	0.0	0.0	0.0
27 APR	10.8	905	868.2	0.0	0.0	0.0	0.0	0.0
4 MAY	12.7	125	819.0	0.0	0.0	0.0	0.0	0.0
11 MAY	15.7	128	715.2	0.0	0.0	0.0	0.0	0.0
18 MAY	15.8	144	780.9	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125	737.4	0.0	0.0	0.0	0.0	0.0
1 JUN	17.4	213	726.9	0.0	0.0	0.0	0.0	0.0
8 JUN	18.9	155	825.3	0.0	0.0	0.0	0.0	0.0
15 JUN	20.8	198	801.0	0.0	0.0	0.0	0.0	0.0
22 JUN	22.6	239	608.3	0.0	0.0	0.0	0.0	0.0
30 JUN	23.8	1,643	309.9	0.0	0.0	235.6	0.0	235.6
6 JUL	25.9	205	780.3	0.0	0.0	2.6	0.0	2.6
13 JUL	24.1	246	757.5	0.0	0.0	5.3	1.3	6.6
20 JUL	26.0	805	859.2	0.0	2.3	268.9	46.6	317.7
27 JUL	24.4	6,720	766.5	40.4	5.2	1,422.0	197.0	1,624.3
2 AUG	26.3	4,243	2,415.9	2.5	53.8	885.4	42.2	981.4
10 AUG	24.1	2,075	732.6	0.0	0.0	384.9	150.2	535.1
17 AUG	25.0	227	812.1	0.0	0.0	11.1	3.7	14.8
14 SEP	23.8	2,357	830.1	0.0	0.0	74.7	13.3	87.9

TABLE 5.1-3 (CONT.)

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
Clupeids								
10 FEB	0.6	130	204.1	0.0	0.0	0.0	0.0	0.0
30 MAR	7.1	130	746.4	0.0	0.0	0.0	0.0	0.0
6 APR	8.3	123	742.2	0.0	0.0	0.0	0.0	0.0
13 APR	7.8	1,575	753.3	0.0	0.0	0.0	0.0	0.0
20 APR	11.4	135	803.1	0.0	0.0	0.0	0.0	0.0
27 APR	10.8	905	868.2	0.0	1.2	2.3	0.0	3.5
4 MAY	12.7	125	819.0	0.0	4.9	37.9	0.0	42.7
11 MAY	15.7	128	715.2	0.0	4.2	21.0	0.0	25.2
18 MAY	15.8	144	780.9	0.0	1.3	3.8	0.0	5.1
25 MAY	16.4	125	737.4	0.0	5.4	44.8	0.0	50.2
1 JUN	17.4	213	726.9	0.0	0.0	22.0	0.0	22.0
8 JUN	18.9	155	825.3	0.0	1.2	9.7	0.0	10.9
15 JUN	20.8	198	801.0	0.0	0.0	2.5	0.0	2.5
22 JUN	22.6	239	608.3	0.0	0.0	0.0	0.0	0.0
30 JUN	23.8	1,643	309.9	0.0	0.0	38.7	0.0	38.7
6 JUL	25.9	205	780.3	0.0	0.0	1.3	0.0	1.3
13 JUL	24.1	246	757.5	0.0	0.0	0.0	1.3	1.3
20 JUL	26.0	805	859.2	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720	766.5	0.0	0.0	0.0	0.0	0.0
2 AUG	26.3	4,243	2,415.9	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075	732.6	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227	812.1	0.0	0.0	0.0	0.0	0.0
14 SEP	23.8	2,357	830.1	0.0	0.0	0.0	0.0	0.0

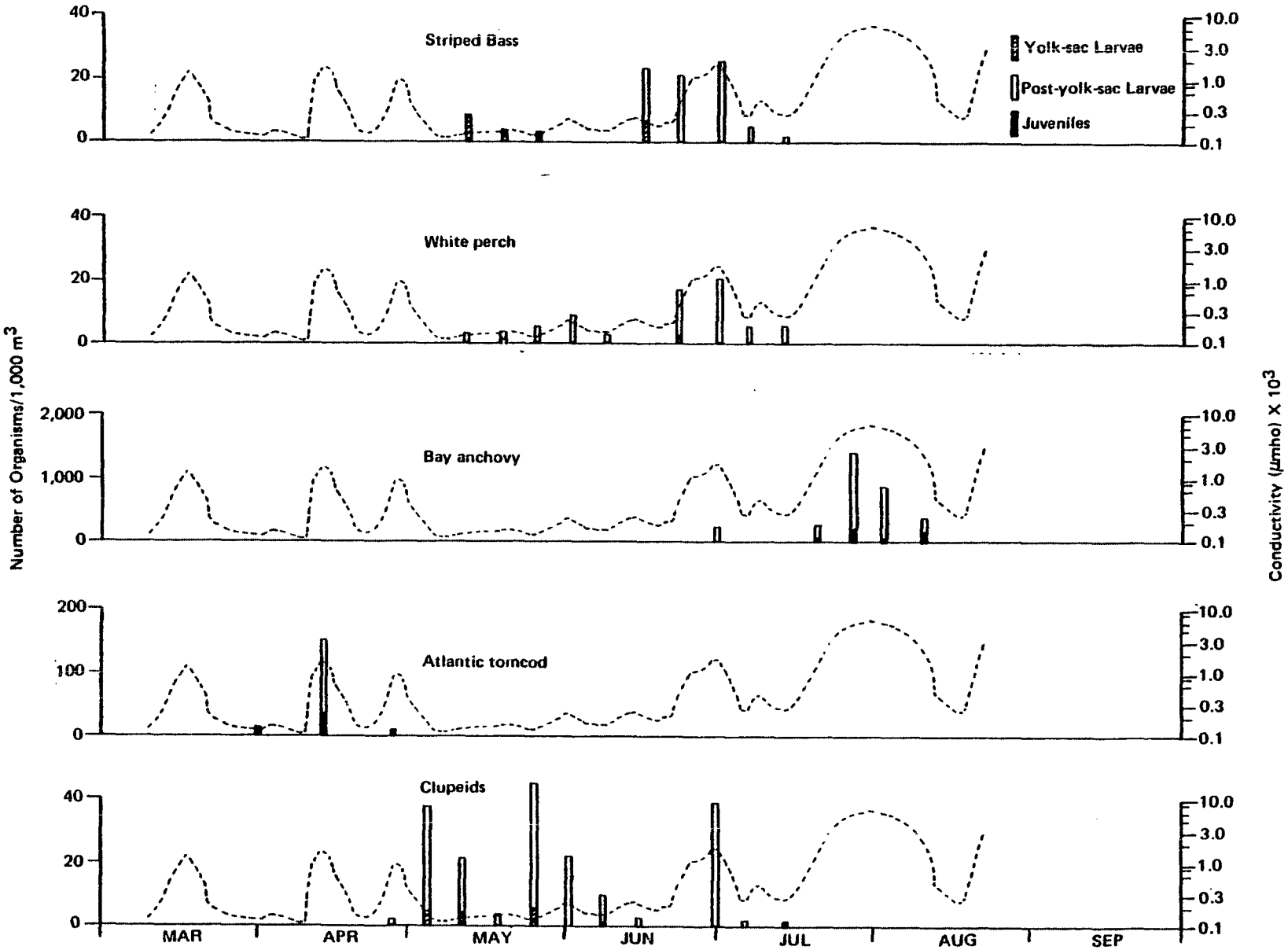


Figure 5.1-1. Mean daily densities of fish larvae and juveniles collected with nets at the Bowline Point plant intake during 1976.

Mean densities of larvae and juveniles at the Bowline Point plant intake were higher at middle and bottom depths than at the surface (Table 5.1-4). Yolk-sac larvae varied in distribution through the water column depending on the species in question and did not show a consistent overall pattern for all species studied.

Larvae of striped bass, white perch, Atlantic tomcod, and bay anchovy were generally less abundant at the intake during daylight hours (noon) than during the night (Table 5.1-5). This was true for all life stages of these species. Clupeid larvae, however, exhibited an average noon density comparable to that found at midnight (average noon density = 16.8, average midnight density = 17.0).

Weekly mean lengths and length-frequency distributions for the stationary net collections are shown for striped bass, white perch, Atlantic tomcod, clupeids, and bay anchovy in Table 5.1-6.

Striped bass larvae ranged from 3 to 13 mm in length and white perch from 3 to 15 mm. Prior to 22 June, no Morone larger than 8 mm had been collected.

Bay anchovy as large as 31 mm were collected in the nets. Two distinct peaks appear in the weekly frequencies, which are similar to those observed in 1975 (Ecological Analysts 1976). These suggest two distinct spawning periods--a minor one in early June and a major one in late June or early July.

TABLE 5.1-4 SEASONAL AVERAGE AS A FUNCTION OF DEPTH AND LIFE STAGE FOR STRIPED BASS, WHITE PERCH, ATLANTIC TOMCOD, CLUPEIDS, AND BAY ANCHOVY OBTAINED FROM NET COLLECTIONS AT THE BOWLINE POINT PLANT INTAKE, 1976

		Density Ratios			
11 MAY - 13 JUL		Striped Bass			
	Depth	Eggs	Yolk-sac Larvae	Larvae	Juveniles
	Surface	0.0	0.9	0.0	0.0
	Middle	0.0	0.0	5.2	0.0
	Bottom	0.0	1.1	16.1	0.0
4 MAY - 14 JUL		White Perch			
	Surface	95.5	0.9	0.8	0.0
	Middle	27.9	0.4	3.3	0.0
	Bottom	18.1	0.3	9.6	0.0
30 MAR - 28 APR		Atlantic Tomcod			
	Surface	0.0	2.9	3.7	0.0
	Middle	0.0	2.5	30.9	8.5
	Bottom	0.0	1.8	59.3	15.1
27 APR - 13 JUL		Clupeids			
	Surface	0.0	0.9	10.4	0.0
	Middle	0.0	2.4	16.9	0.0
	Bottom	0.0	1.6	16.2	0.3
30 JUN - 15 SEP		Bay Anchovy			
	Surface	0.5	4.3	108.5	0.9
	Middle	0.8	18.7	480.3	1.8
	Bottom	10.8	25.8	778.4	126.1

TABLE 5.1-5 DAILY AVERAGE DENSITIES BY LIFE STAGE[a] AND TIME OF DAY FOR SPECIES OBTAINED FROM NET COLLECTIONS AT THE BOWLINE PLANT INTAKE, 1976

	Density[b]																			
	Noon					Sunset					Midnight					Sunrise				
Date	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*
White Perch																				
4 MAY	0.0	0.0	0.0	0.0	203.7	0.0	0.0	0.0	0.0	232.8	42.3	0.0	0.0	0.0	189.0	227.4	0.0	0.0	0.0	193.5
11 MAY	37.7	0.0	0.0	0.0	185.7	128.2	0.0	6.4	0.0	156.0	159.0	0.0	0.0	0.0	169.8	4.9	0.0	4.9	0.0	203.7
18 MAY	4.5	4.5	0.0	0.0	223.8	0.0	0.0	0.0	0.0	192.6	0.0	0.0	0.0	0.0	185.7	22.4	0.0	5.6	0.0	178.8
25 MAY	5.6	0.0	5.6	0.0	178.8	251.7	0.0	13.6	0.0	147.0	543.7	0.0	0.0	0.0	196.8	558.7	0.0	4.6	0.0	214.8
1 JUN	0.0	0.0	0.0	0.0	165.0	0.0	0.0	8.9	0.0	223.8	13.6	0.0	0.0	0.0	147.0	41.9	0.0	20.9	0.0	191.1
8 JUN	0.0	0.0	0.0	0.0	232.8	0.0	5.3	0.0	0.0	189.9	13.4	0.0	0.0	0.0	223.8	11.2	5.6	0.0	0.0	178.8
15 JUN	0.0	0.0	0.0	0.0	185.7	0.0	0.0	0.0	0.0	232.8	86.2	0.0	0.0	0.0	185.7	30.5	0.0	0.0	0.0	196.8
22 JUN	0.0	4.5	31.3	0.0	223.8	0.0	0.0	8.6	0.0	116.4	0.0	0.0	15.3	0.0	130.5	0.0	0.0	0.0	0.0	137.6
30 JUN	12.3	0.0	0.0	0.0	162.9	--	--	--	--	--	0.0	0.0	40.8	0.0	147.0	--	--	--	--	--
6 JUL	0.0	0.0	0.0	0.0	232.8	0.0	0.0	6.8	0.0	147.0	0.0	0.0	4.6	0.0	214.8	0.0	0.0	10.8	0.0	185.7
13 JUL	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	162.9	0.0	0.0	18.6	0.0	214.8
Average	5.5	0.8	3.4	0.0		34.5	0.5	4.0	0.0		78.0	0.0	5.5	0.0		81.5	0.5	5.9	0.0	
Striped bass																				
11 MAY	0.0	5.4	0.0	0.0	185.7	0.0	19.2	0.0	0.0	156.0	0.0	5.9	0.0	0.0	169.8	0.0	4.9	0.0	0.0	203.7
18 MAY	0.0	0.0	0.0	0.0	223.8	0.0	5.2	0.0	0.0	192.6	0.0	5.4	0.0	0.0	185.7	0.0	5.6	0.0	0.0	178.8
25 MAY	0.0	0.0	0.0	0.0	178.8	0.0	13.6	0.0	0.0	147.0	0.0	0.0	0.0	0.0	196.8	0.0	0.0	0.0	0.0	214.8
1 JUN	0.0	0.0	0.0	0.0	165.0	0.0	0.0	0.0	0.0	223.8	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	191.1
8 JUN	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	189.9	0.0	0.0	0.0	0.0	223.8	0.0	0.0	0.0	0.0	178.8
15 JUN	0.0	10.8	21.5	0.0	185.7	0.0	4.3	21.5	0.0	232.8	0.0	5.4	16.1	0.0	185.7	0.0	5.1	30.5	0.0	196.8
22 JUN	0.0	0.0	0.0	0.0	223.8	0.0	0.0	0.0	0.0	116.4	0.0	0.0	23.0	0.0	130.5	0.0	0.0	72.7	0.0	137.6
30 JUN	0.0	0.0	0.0	0.0	162.9	--	--	--	--	--	0.0	0.0	54.4	0.0	147.0	--	--	--	--	--
6 JUL	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	147.0	0.0	0.0	4.6	0.0	214.8	0.0	0.0	16.2	0.0	185.7
13 JUL	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	232.8	0.0	0.0	6.1	0.0	162.9	0.0	0.0	0.0	0.0	214.8
Average	0.0	1.6	2.2	0.0		0.0	4.2	2.2	0.0		0.0	1.7	10.4	0.0		0.0	1.6	11.9	0.0	

(a) YSL = yolk-sac larvae; Lar = larvae; Juv = juveniles
(b) Density = No./1,000 m^3.

Note: * indicates total volume in cubic meters.
Dashes indicate no data available.

TABLE 5.1-5 (CONT.)

	Density[b]																			
	Noon					Sunset					Midnight					Sunrise				
Date	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*	Egg	YSL	Lar	Juv	Total Volume*
Atlantic Tomcod																				
30 MAR	0.0	4.5	0.0	0.0	223.8	0.0	30.5	0.0	0.0	196.8	0.0	6.8	13.6	0.0	147.0	0.0	5.6	0.0	0.0	178.8
6 APR	0.0	0.0	0.0	0.0	162.9	0.0	0.0	0.0	0.0	214.8	0.0	0.0	0.0	0.0	178.8	0.0	0.0	4.9	0.0	185.7
13 APR	0.0	0.0	21.5	8.6	232.8	0.0	0.0	391.5	89.5	178.8	0.0	0.0	173.4	33.6	178.8	0.0	0.0	43.0	12.3	162.9
20 APR	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	185.7	0.0	0.0	4.6	4.7	214.8	0.0	0.0	0.0	0.0	178.8
27 APR	0.0	0.0	0.0	0.0	232.8	0.0	0.0	5.6	0.0	178.8	0.0	0.0	13.4	17.9	223.8	0.0	0.0	0.0	4.3	232.8
Average	0.0	0.9	6.1	1.7		0.0	6.1	79.4	17.9		0.0	1.4	41.0	11.2		0.0	1.1	8.6	3.3	
Bay anchovy																				
30 JUN	0.0	0.0	6.1	0.0	162.9	--	--	--	--	--	0.0	0.0	489.8	0.0	147.0	--	--	--	--	--
6 JUL	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	214.8	0.0	0.0	10.8	0.0	185.7
13 JUL	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	232.8	0.0	0.0	24.6	6.1	162.9	0.0	0.0	0.0	0.0	214.8
20 JUL	0.0	0.0	8.6	0.0	232.8	0.0	0.0	452.2	91.5	196.8	0.0	4.6	544.7	97.8	214.8	0.0	4.7	107.1	4.6	214.8
29 JUL	6.1	12.3	1,105.0	0.0	162.9	67.0	0.0	1,438.8	89.4	223.8	54.4	13.6	1,884.4	387.8	147.0	30.1	0.0	1,335.9	317.9	232.8
3 AUG	0.0	42.9	927.8	0.0	232.8	5.6	89.5	542.5	0.0	178.8	0.0	8.6	1,808.4	163.2	232.8	0.0	0.0	1,342.3	50.3	178.8
10 AUG	0.0	0.0	61.2	0.0	147.0	0.0	0.0	250.2	22.3	223.8	0.0	0.0	428.6	20.4	147.0	0.0	0.0	716.9	474.9	214.8
17 AUG	0.0	0.0	0.0	0.0	223.8	0.0	0.0	10.8	5.4	185.7	0.0	0.0	0.0	4.5	223.8	0.0	0.0	39.1	5.6	178.8
14 SEP	0.0	0.0	0.0	0.0	186.7	0.0	0.0	116.2	35.7	223.8	0.0	0.0	142.3	15.2	196.8	0.0	0.0	35.7	0.0	223.8
Average	0.7	6.1	234.3	0.0		8.1	9.9	312.3	27.1		6.0	26.8	591.4	77.2		3.3	0.5	398.6	94.8	
Clupeids																				
27 APR	0.0	0.0	0.0	0.0	232.8	0.0	5.6	5.6	0.0	178.8	0.0	0.0	0.0	0.0	223.8	0.0	0.0	4.3	0.0	232.8
4 MAY	0.0	0.0	24.6	0.0	203.7	0.0	4.3	12.9	0.0	232.8	0.0	0.0	100.5	0.0	189.0	0.0	15.5	20.7	0.0	193.5
11 MAY	0.0	0.0	10.8	0.0	185.7	0.0	0.0	25.6	0.0	156.0	0.0	5.9	17.7	0.0	169.8	0.0	9.8	0.0	0.0	203.7
18 MAY	0.0	0.0	4.5	0.0	223.8	0.0	5.2	5.2	0.0	192.6	0.0	0.0	5.4	0.0	185.7	0.0	0.0	0.0	0.0	178.8
25 MAY	0.0	0.0	83.9	0.0	178.8	0.0	20.4	88.4	0.0	147.0	0.0	0.0	10.2	0.0	196.8	0.0	4.7	9.3	0.0	214.8
1 JUN	0.0	0.0	12.1	0.0	165.0	0.0	0.0	17.9	0.0	223.8	0.0	0.0	47.6	0.0	147.0	0.0	0.0	15.7	0.0	191.1
8 JUN	0.0	0.0	4.3	0.0	232.8	0.0	0.0	10.5	0.0	189.9	0.0	0.0	8.9	0.0	223.8	0.0	5.6	16.8	0.0	178.8
15 JUN	0.0	0.0	0.0	0.0	785.7	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	185.7	0.0	0.0	10.2	0.0	196.8
22 JUN	0.0	0.0	0.0	0.0	223.8	0.0	0.0	0.0	0.0	116.4	0.0	0.0	0.0	0.0	130.5	0.0	0.0	0.0	0.0	137.6
30 JUN	0.0	0.0	61.4	0.0	162.9	--	--	--	--	--	0.0	0.0	13.6	0.0	147.0	--	--	--	--	--
6 JUL	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	214.8	0.0	0.0	5.4	0.0	185.7
13 JUL	0.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0	0.0	232.8	0.0	0.0	0.0	6.1	162.9	0.0	0.0	0.0	0.0	214.8
Average	0.0	0.0	16.8	0.0		0.0	3.0	13.8	0.0		0.0	0.5	17.0	0.5		0.0	3.0	6.9	0.0	

(a) YSL = yolk-sac larvae; Lar = larvae; Juv = juveniles.
(b) Density = No./1,000 m^3.

Note: * indicates total volume in cubic meters.
Dashes indicate no data available.

TABLE 5.1-6 FISH SPECIES LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD ERROR OF LENGTHS ON A WEEKLY BASIS FOR NET COLLECTIONS AT THE BOWLINE POINT INTAKE, 1976

Striped Bass

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	6.	3.50	0.224	0.	6.	0.	0.	0.	0.	0.	0.	0.	3.	4.
05/18/76	3.	3.33	0.333	0.	3.	0.	0.	0.	0.	0.	0.	0.	3.	4.
05/25/76	2.	6.00	0.000	0.	0.	2.	0.	0.	0.	0.	0.	0.	6.	6.
06/01/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/08/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/15/76	23.	5.96	0.270	0.	6.	17.	0.	0.	0.	0.	0.	0.	3.	7.
06/22/76	13.	6.77	0.166	0.	0.	13.	0.	0.	0.	0.	0.	0.	6.	8.
06/30/76	8.	8.63	0.680	0.	0.	3.	4.	1.	0.	0.	0.	0.	6.	12.
07/06/76	4.	10.00	0.707	0.	0.	1.	3.	0.	0.	0.	0.	0.	8.	11.
07/13/76	1.	13.00	0.000	0.	0.	0.	0.	1.	0.	0.	0.	0.	13.	13.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-6 (CONT.)

White Perch

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	2.	4.50	0.500	0.	2.	0.	0.	0.	0.	0.	0.	0.	4.	5.
05/18/76	1.	4.00	0.000	0.	1.	0.	0.	0.	0.	0.	0.	0.	4.	4.
05/25/76	4.	4.75	0.250	0.	4.	0.	0.	0.	0.	0.	0.	0.	4.	5.
06/01/76	6.	5.00	0.365	0.	4.	2.	0.	0.	0.	0.	0.	0.	4.	6.
06/08/76	2.	3.00	0.000	0.	2.	0.	0.	0.	0.	0.	0.	0.	3.	3.
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	11.	4.09	0.251	0.	10.	1.	0.	0.	0.	0.	0.	0.	3.	6.
06/30/76	6.	5.17	0.401	0.	3.	3.	0.	0.	0.	0.	0.	0.	4.	6.
07/06/76	4.	11.25	1.250	0.	0.	0	3.	0.	1.	0.	0.	0.	10.	15.
07/13/76	4.	11.75	2.016	0.	0.	1.	0.	2.	1.	0.	0.	0.	6.	15.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-6 (CONT.)

Atlantic Tomcod

WEEK	N	X	SE	LENGTH INTERVALS (NM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	10.	7.90	0.277	0.	0.	9.	1.	0.	0.	0.	0.	0.	7.	10.
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	139.	14.70	0.183	0.	0.	0.	10.	50.	69.	9.	1.	0.	9.	21.
04/20/76	4.	11.50	3.202	0.	0.	2.	0.	0.	1.	1.	0.	0.	6.	18.
04/27/76	9.	17.56	1.029	0.	0.	0.	0.	1.	4.	2.	2.	0.	13.	22.
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/01/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/08/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-6 (CONT.)

Clupeids

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	3.	6.67	0.333	0.	0.	3.	0.	0.	0.	0.	0.	0.	6.	7.
05/04/76	33.	7.85	0.218	0.	0.	21.	12.	0.	0.	0.	0.	0.	6.	10.
05/11/76	18.	8.44	0.573	0.	2.	10.	4.	2.	0.	0.	0.	0.	4.	13.
05/18/76	4.	6.75	0.479	0.	0.	4.	0.	0.	0.	0.	0.	0.	6.	8.
05/25/76	34.	7.09	0.236	0.	2.	31.	0.	1.	0.	0.	0.	0.	4.	13.
06/01/76	16.	7.88	0.256	0.	0.	13.	3.	0.	0.	0.	0.	0.	7.	10.
06/08/76	8.	7.38	0.754	0.	2.	3.	3.	0.	0.	0.	0.	0.	4.	10.
06/15/76	2.	8.00	0.000	0.	0.	2.	0.	0.	0.	0.	0.	0.	8.	8.
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	12.	5.92	0.417	0.	6.	5.	1.	0.	0.	0.	0.	0.	5.	10.
07/06/76	1.	15.00	0.000	0.	0.	0.	0.	0.	1.	0.	0.	0.	15.	15.
07/13/76	1.	24.00	0.000	0.	0.	0.	0.	0.	0.	0.	0.	1.	24.	24.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-6 (CONT.)

Bay Anchovy

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/01/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/08/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	72.	6.99	0.213	0.	10.	55.	4.	3.	0.	0.	0.	0.	5.	14.
07/06/76	2.	12.50	0.500	0.	0.	0.	0.	2.	0.	0.	0.	0.	12.	13.
07/13/76	5.	17.80	1.715	0.	0.	0.	0.	1.	1.	1.	2.	0.	13.	22.
07/20/76	174.	14.99	0.411	0.	11.	12.	28.	30.	19.	35.	39.	0.	3.	23.
07/27/76	576.	9.66	0.276	4.	209.	152.	55.	22.	24.	29.	59.	22.	2.	26.
08/02/76	1273.	7.67	0.157	14.	622.	320.	93.	41.	53.	54.	55.	21.	2.	31.
08/10/76	243.	17.19	0.307	0.	0.	10.	31.	27.	50.	62.	51.	12.	6.	30.
08/17/76	12.	18.50	0.597	0.	0.	0.	0.	0.	4.	6.	2.	0.	15.	22.
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	73.	15.04	0.463	0.	0.	3.	13.	14.	23.	15.	3.	2.	8.	24.

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

5.1.3.2 Abundance and Percent Composition (Three-Depth Manifold Pump Collections at the Intake)

The total number of organisms and percent composition of each species and life stage for the intake abundance collections using the three-depth manifold pump apparatus is shown in Table 5.1-7. Atlantic tomcod larvae exhibited the highest numbers of this type of collection, constituting 26.9 percent of the total. Less than 2.2 percent of the total collection consisted of species other than Atlantic tomcod, bay anchovy, striped bass, white perch, and clupeids. This compares closely with the net sample results* with the exception of striped bass, which constituted less than 2.2 percent of the net collections (Table 5.1-2).

Daily average densities for striped bass, white perch, Atlantic tomcod, bay anchovy, and clupeids obtained from collections made with the three-depth manifold pump system are presented in Table 5.1-8. Seasonal trends are displayed with conductivity in Figure 5.1-2. It should be noted that sampling in March was done exclusively with the pump system, whereas the stationary plankton nets were the only collection method employed in April and the first half of May. Both systems were employed in concert starting on 25 May. Larval densities were roughly comparable for Morone spp. and clupeids collected with the nets and the three-depth manifold pump system in the early part of the entrainment season. The highest density for the sampling season using the three-depth manifold pump system was for Atlantic tomcod larvae on 15 March (1,075.6 larvae/1,000 m^3).

---

* Net collections were not carried out during the early part of the spawning season of Atlantic tomcod, whereas pump collections were not made in April; therefore, no comparison is implied for this species.

TABLE 5.1-7 NUMBER AND PERCENT COMPOSITION BY LIFE STAGE OF ICHTHYOPLANKTON COLLECTED USING THE THREE-DEPTH MANIFOLD PUMP SYSTEM AT THE BOWLINE POINT PLANT INTAKE, 1976

Species	Life Stage	No. Collected	Percent Composition
Atlantic tomcod	Larvae	220	26.9
Atlantic tomcod	Yolk-sac larvae	137	16.8
Bay anchovy	Egg	119	14.6
Bay anchovy	Larvae	102	12.5
Bay anchovy	--(a)	102	12.5
Striped bass	Larvae	34	4.2
White perch	Larvae	20	2.4
White perch	--	18	2.2
Clupeids	Larvae	18	2.2
Atlantic tomcod	--	10	1.2
Unidentified egg	Egg	6	0.7
Striped bass	--	5	0.6
Unidentified larvae	Larvae	4	0.5
Brown bullhead	--	3	0.4
Centrarchids	Larvae	3	0.4
Clupeids	--	2	0.2
American eel	--	2	0.2
Alosa spp.	Larvae	2	0.2
Morone spp.	Larvae	2	0.2
Northern pipefish	--	2	0.2
Bay anchovy	Yolk-sac larvae	1	0.1
Tessellated darter	--	1	0.1
Cyprinids	Larvae	1	0.1
American shad	Larvae	1	0.1
Fundulus spp.	Larvae	1	0.1
Hogchoker		1	0.1

(a) Dashes indicate juvenile or older.

TABLE 5.1-8 DAILY AVERAGE DENSITY BY LIFE STAGE AND SAMPLE DATE FOR FISH COLLECTED WITH THE THREE-DEPTH MANIFOLD PUMP SYSTEM AT THE BOWLINE POINT PLANT INTAKE, 1976

Date	Average Temperature (C)	Average Conductivity (umho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
Striped Bass								
5 FEB	0.2	120.	95.9	0.0	0.0	0.0	0.0	0.0
11 FEB	1.0	160.	47.9	0.0	0.0	0.0	0.0	0.0
17 FEB	1.8	285.	191.6	0.0	0.0	0.0	0.0	0.0
24 FEB	1.5	113.	197.9	0.0	0.0	0.0	0.0	0.0
2 MAR	2.5	115.	170.6	0.0	0.0	0.0	0.0	0.0
9 MAR	2.6	110.	196.9	0.0	0.0	0.0	0.0	0.0
16 MAR	2.8	1,101.	191.5	0.0	0.0	0.0	0.0	0.0
23 MAR	5.1	153.	174.3	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125.	229.0	0.0	0.0	0.0	0.0	0.0
1 JUN	17.4	213.	228.6	0.0	0.0	0.0	0.0	0.0
8 JUN	19.2	159.	228.0	0.0	0.0	4.4	0.0	4.4
15 JUN	20.8	198.	225.8	0.0	0.0	35.4	0.0	35.4
22 JUN	22.7	239.	228.2	0.0	0.0	43.8	0.0	43.8
30 JUN	24.0	1,775.	57.0	0.0	0.0	17.5	0.0	17.5
6 JUL	25.8	205.	232.2	0.0	0.0	25.8	4.3	30.1
13 JUL	24.2	246.	227.9	0.0	0.0	35.1	8.8	43.9
20 JUL	26.2	690.	87.3	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720.	232.4	0.0	0.0	0.0	4.3	4.3
2 AUG	26.1	4,237.	460.5	0.0	0.0	0.0	0.0	0.0
5 AUG	27.0	4,050.	207.6	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075.	253.2	0.0	0.0	0.0	3.9	3.9
17 AUG	25.0	227.	240.4	0.0	0.0	0.0	0.0	0.0
24 AUG	26.5	5,250.	60.8	0.0	0.0	0.0	0.0	0.0
14 SEP	23.9	2,356.	166.0	0.0	0.0	0.0	0.0	0.0
White Perch								
5 FEB	0.2	120.	95.9	0.0	0.0	0.0	0.0	0.0
11 FEB	1.0	160.	47.9	0.0	0.0	0.0	0.0	0.0
17 FEB	1.8	285.	191.6	0.0	0.0	0.0	0.0	0.0
24 FEB	1.5	113.	197.9	0.0	0.0	0.0	0.0	0.0
2 MAR	2.5	115.	170.6	0.0	0.0	0.0	0.0	0.0
9 MAR	2.6	110.	196.9	0.0	0.0	0.0	0.0	0.0
16 MAR	2.8	1,101.	191.5	0.0	0.0	0.0	0.0	0.0
23 MAR	5.1	153.	174.3	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125.	229.0	0.0	0.0	8.7	4.4	13.1
1 JUN	17.4	213.	228.6	0.0	0.0	4.4	0.0	4.4
8 JUN	19.2	159.	228.0	0.0	0.0	4.4	0.0	4.4
15 JUN	20.8	198.	225.8	0.0	0.0	0.0	0.0	0.0
22 JUN	22.7	239.	228.2	0.0	0.0	0.0	0.0	0.0
30 JUN	24.0	1,775.	57.0	0.0	0.0	35.1	0.0	35.1
6 JUL	25.8	205.	232.2	0.0	0.0	12.9	0.0	12.9

TABLE 5.1-8 (CONT.)

Date	Average Temperature (C)	Average Conductivity (umho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3) Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
White Perch (Cont.)								
13 JUL	24.2	246.	227.9	0.0	0.0	48.3	26.3	74.6
20 JUL	26.2	690.	87.3	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720.	232.4	0.0	0.0	0.0	0.0	0.0
2 AUG	26.1	4,237.	460.5	0.0	0.0	0.0	17.4	17.4
5 AUG	27.0	4,050.	207.6	0.0	0.0	0.0	4.8	4.8
10 AUG	24.1	2,075.	253.2	0.0	0.0	0.0	7.9	7.9
17 AUG	25.0	227.	240.4	0.0	0.0	0.0	0.0	0.0
24 AUG	26.5	5,250.	60.8	0.0	0.0	0.0	0.0	0.0
14 SEP	23.9	2,356.	166.0	0.0	0.0	0.0	0.0	0.0
Atlantic Tomcod								
5 FEB	0.2	120.	95.9	0.0	0.0	0.0	0.0	0.0
11 FEB	1.0	160.	47.9	0.0	0.0	0.0	0.0	0.0
17 FEB	1.8	285.	191.6	0.0	0.0	0.0	0.0	0.0
24 FEB	1.5	113.	197.9	0.0	85.9	0.0	0.0	85.9
2 MAR	2.5	115.	170.6	0.0	58.6	0.0	0.0	58.6
9 MAR	2.6	110.	196.9	0.0	284.4	0.0	0.0	284.4
16 MAR	2.8	1,101.	191.5	0.0	10.4	1,075.6	0.0	1,086.0
23 MAR	5.1	153.	174.3	0.0	298.4	80.3	0.0	378.7
25 MAY	16.4	125.	229.0	0.0	0.0	0.0	4.4	4.4
1 JUN	17.4	213.	228.6	0.0	0.0	0.0	21.9	21.9
8 JUN	19.2	159.	228.0	0.0	0.0	0.0	4.4	4.4
15 JUN	20.8	198.	225.8	0.0	0.0	0.0	8.9	8.9
22 JUN	22.7	239.	228.2	0.0	0.0	0.0	0.0	0.0
30 JUN	24.0	1,775.	57.0	0.0	0.0	0.0	0.0	0.0
6 JUL	25.8	205.	232.2	0.0	0.0	0.0	4.3	4.3
13 JUL	24.2	246.	227.9	0.0	0.0	0.0	0.0	0.0
20 JUL	26.2	690.	87.3	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720.	232.4	0.0	0.0	0.0	0.0	0.0
2 AUG	26.1	4,237.	460.5	0.0	0.0	0.0	0.0	0.0
5 AUG	27.0	4,050.	207.6	0.0	0.0	0.0	0.0	0.0
10 AUG	24.1	2,075.	253.2	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227.	240.4	0.0	0.0	0.0	0.0	0.0
24 AUG	26.5	5,250.	60.8	0.0	0.0	0.0	0.0	0.0
14 SEP	23.9	2,356.	166.0	0.0	0.0	0.0	0.0	0.0
Bay Anchovy								
5 FEB	0.2	120.	95.9	0.0	0.0	0.0	0.0	0.0
11 FEB	1.0	160.	47.9	0.0	0.0	0.0	0.0	0.0
17 FEB	1.8	285.	191.6	0.0	0.0	0.0	0.0	0.0
24 FEB	1.5	113.	197.9	0.0	0.0	0.0	0.0	0.0
2 MAR	2.5	115.	170.6	0.0	0.0	0.0	0.0	0.0
9 MAR	2.6	110.	196.9	0.0	0.0	0.0	0.0	0.0

TABLE 5.1-8 (CONT.)

Date	Average Temperature (C)	Average Conductivity (umho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
Bay Anchovy (Cont.)								
16 MAR	2.8	1,101.	191.5	0.0	0.0	0.0	0.0	0.0
23 MAR	5.1	153.	174.3	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125.	229.0	0.0	0.0	0.0	0.0	0.0
1 JUN	17.4	213.	228.6	0.0	0.0	0.0	0.0	0.0
8 JUN	19.2	159.	228.0	0.0	0.0	0.0	0.0	0.0
15 JUN	20.8	198.	225.8	0.0	0.0	0.0	0.0	0.0
22 JUN	22.7	239.	228.2	0.0	0.0	0.0	0.0	0.0
30 JUN	24.0	1,775.	57.0	0.0	0.0	0.0	0.0	0.0
6 JUL	25.8	205.	232.2	0.0	0.0	0.0	0.0	0.0
13 JUL	24.2	246.	227.9	0.0	0.0	13.2	0.0	13.2
20 JUL	26.2	690.	87.3	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720.	232.4	494.8	4.3	167.8	206.5	378.7
2 AUG	26.1	4,237.	460.5	8.7	0.0	76.0	80.3	156.4
5 AUG	27.0	4,050.	207.6	0.0	0.0	38.5	53.0	91.5
10 AUG	24.1	2,075.	253.2	0.0	0.0	59.2	23.7	82.9
17 AUG	25.0	227.	240.4	0.0	0.0	0.0	0.0	0.0
24 AUG	26.5	5,250.	60.8	0.0	0.0	16.4	0.0	16.4
14 SEP	23.9	2,356.	166.0	0.0	0.0	6.0	0.0	6.0
Clupeids								
5 FEB	0.2	120.	95.9	0.0	0.0	0.0	0.0	0.0
11 FEB	1.0	160.	47.9	0.0	0.0	0.0	0.0	0.0
17 FEB	1.8	285.	191.6	0.0	0.0	0.0	0.0	0.0
24 FEB	1.5	113.	197.9	0.0	0.0	0.0	0.0	0.0
2 MAR	2.5	115.	170.6	0.0	0.0	0.0	0.0	0.0
9 MAR	2.6	110.	196.9	0.0	0.0	0.0	0.0	0.0
16 MAR	2.8	1,101.	191.5	0.0	0.0	0.0	0.0	0.0
23 MAR	5.1	153.	174.3	0.0	0.0	0.0	0.0	0.0
25 MAY	16.4	125.	229.0	0.0	0.0	+26.2	0.0	26.2
1 JUN	17.4	213.	228.6	0.0	0.0	+30.6	0.0	30.6
8 JUN	19.2	159.	228.0	0.0	0.0	13.2	0.0	13.2
15 JUN	20.8	198.	225.8	0.0	0.0	0.0	0.0	0.0
22 JUN	22.7	239.	228.2	0.0	0.0	0.0	0.0	0.0
30 JUN	24.0	1,775.	57.0	0.0	0.0	52.6	0.0	52.6
6 JUL	25.8	205.	232.2	0.0	0.0	8.6	0.0	8.6
13 JUL	24.2	246.	227.9	0.0	0.0	0.0	0.0	0.0
20 JUL	26.2	690.	87.3	0.0	0.0	0.0	0.0	0.0
27 JUL	24.4	6,720.	232.4	0.0	0.0	0.0	0.0	0.0
2 AUG	26.1	4,237.	460.5	0.0	0.0	0.0	2.2	2.2
5 AUG	27.0	4,050.	207.6	0.0	0.0	0.0	4.8	4.8
10 AUG	24.1	2,075.	253.2	0.0	0.0	0.0	0.0	0.0
17 AUG	25.0	227.	240.4	0.0	0.0	0.0	0.0	0.0
24 AUG	26.5	5,250.	60.8	0.0	0.0	0.0	0.0	0.0
14 SEP	23.9	2,356.	166.0	0.0	0.0	0.0	0.0	0.0

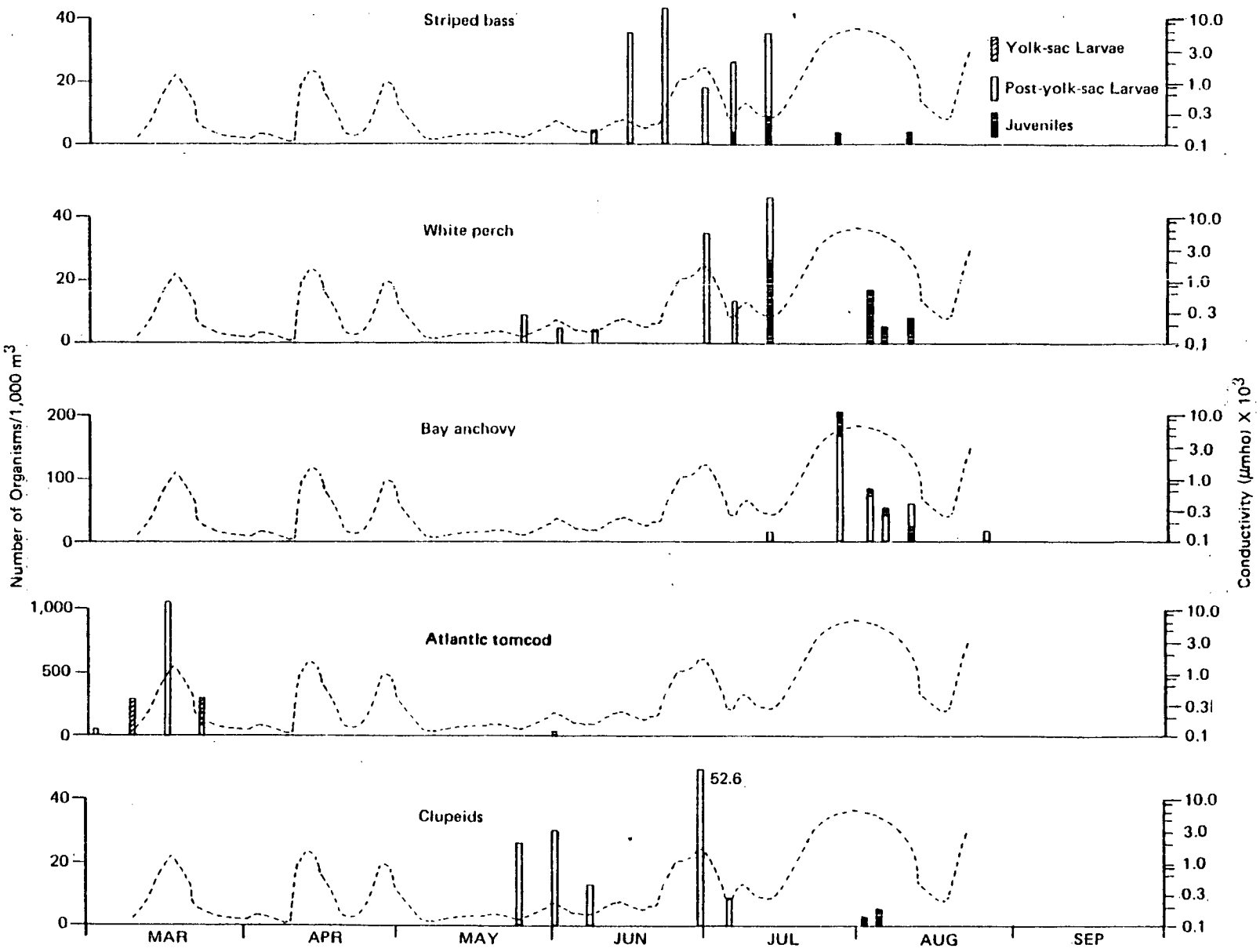


Figure 5.1-2. Mean daily densities of fish larvae and juveniles collected with the three-depth manifold pump system at the Bowline Point plant intake during 1976.

Weekly mean lengths and length-frequency distributions for the three-depth manifold pump collections are shown for striped bass, white perch, Atlantic tomcod, clupeids, and bay anchovy in Table 5.1-9. Striped bass ranging in length from 5 to 42 mm were collected with the pump system. White perch ranged from 3 to 50 mm.

TABLE 5.1-9 FISH SPECIES LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD ERROR OF LENGTHS ON A WEEKLY BASIS FOR PUMP COLLECTIONS AT THE BOWLINE POINT INTAKE, 1976

Striped Bass

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76*	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/01/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/08/76	1.	9.00	0.000	0.	0.	0.	1.	0.	0.	0.	0.	0.	9.	9.
06/15/76	7.	6.71	0.184	0.	0.	7.	0.	0.	0.	0.	0.	0.	6.	7.
06/22/76	9.	7.89	0.423	0.	1.	5.	3.	0.	0.	0.	0.	0.	5.	9.
06/30/76	1.	9.00	0.000	0.	0.	0.	1.	0.	0.	0.	0.	0.	9.	9.
07/06/76	7.	16.14	1.010	0.	0.	0.	0.	2.	3.	2.	0.	0.	13.	20.
07/13/76	9.	21.44	0.648	0.	0.	0.	0.	0.	0.	2.	6.	1.	18.	24.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	1.	42.00	0.000	0.	0.	0.	0.	0.	0.	0.	0.	1.	42.	42.
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-9 (CONT.)

White Perch

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	3.	22.33	18.836	0.	2.	0.	0.	0.	0.	0.	0.	1.	3.	60.
06/01/76	1.	4.00	0.000	0.	1.	0.	0.	0.	0.	0.	0.	0.	4.	4.
06/08/76	1.	4.00	0.000	0.	1.	0.	0.	0.	0.	0.	0.	0.	4.	4.
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	0	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	2.	6.50	0.500	0.	0.	2.	0.	0.	0.	0.	0.	0.	6.	7.
07/06/76	3.	14.00	0.577	0.	0.	0.	0.	2.	1.	0.	0.	0.	13.	15.
07/13/76	17.	16.82	1.267	0.	1.	0.	0.	7.	1.	2.	5.	1.	5.	25.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	9.	37.67	1.993	0.	0.	0.	0.	0.	0.	0.	0.	9.	31.	50.
08/10/76	2.	37.50	9.500	0.	0.	0.	0.	0.	0.	0.	0.	2.	28.	47.
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-9 (CONT.)

Atlantic Tomcod

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	8.	6.13	0.125	0.	0.	8.	0.	0.	0.	0.	0.	0.	6.	7.
03/02/76	10.	6.60	0.163	0.	0.	10.	0.	0.	0.	0.	0.	0.	6.	7.
03/09/76	49.	7.59	0.077	0.	0.	49.	0.	0.	0.	0.	0.	0.	6.	8.
03/16/76	75.	8.13	0.092	0.	0.	56.	19.	0.	0.	0.	0.	0.	7.	10.
03/23/76	63.	7.97	0.115	0.	0.	48.	15.	0.	0.	0.	0.	0.	6.	11.
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	1.	50.00	0.000	0.	0.	0.	0.	0.	0.	0.	0.	1.	50.	50.
06/01/76	5.	63.60	3.108	0.	0.	0.	0.	0.	0.	0.	0.	5.	57.	72.
06/08/76	1.	62.00	0.000	0.	0.	0.	0.	0.	0.	0.	0.	1.	62.	62.
06/15/76	2.	61.50	1.500	0.	0.	0.	0.	0.	0.	0.	0.	2.	60.	63.
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/06/76	1.	75.00	0.000	0.	0.	0.	0.	0.	0.	0.	0.	1.	75.	75.
07/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-9 (CONT.)

Clupeids

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	5.	6.60	0.678	0.	2.	3.	0.	0.	0.	0.	0.	0.	5.	8.
06/01/76	6.	9.00	1.291	0.	0.	3.	2.	0.	1.	0.	0.	0.	6.	15.
06/08/76	2.	6.00	1.000	0.	1.	1.	0.	0.	0.	0.	0.	0.	5.	7.
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/06/76	2.	15.00	1.000	0.	0.	0.	0.	1.	1.	0.	0.	0.	14.	16.
07/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/02/76	1.	6.00	0.000	0.	0.	1.	0.	0.	0.	0.	0.	0.	6.	6.
08/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

TABLE 5.1-9 (CONT.)

Bay Anchovy

WEEK	N	X	SE	LENGTH INTERVALS (MM) 0.0-2.9	3.0-5.9	6.0-8.9	9.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	RANGE MIN	RANGE MAX
02/05/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/10/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
02/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/09/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/16/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/23/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/13/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
04/27/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/11/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/18/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
05/25/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/01/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/08/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/15/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/22/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
06/30/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/06/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/13/76	3.	13.67	0.882	0.	0.	0.	0.	2.	1.	0.	0.	0.	12.	15.
07/20/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
07/27/76	70.	15.81	1.048	1.	11.	13.	4.	1.	3.	6.	10.	21.	2.	29.
08/02/76	67.	19.66	1.158	0.	11.	2.	4.	4.	5.	3.	0.	38.	3.	33.
08/10/76	20.	20.95	1.610	0.	0.	0.	0.	2.	6.	6.	0.	6.	13.	37.
08/17/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
08/24/76	0.	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/76	1.	15.00	0.000	0.	0.	0.	0.	0.	1.	0.	0.	0.	15.	15.

N=NUMBER OF LENGTHS
X=MEAN LENGTH
SE=STANDARD ERROR

REFERENCES: SECTION 5.1

Ecological Analysts, Inc. 1976. Bowline Point Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretive Report. Part II: Ichthyoplankton Entrainment Abundance.

Lawler, Matusky & Skelly, Engineers. 1975. Hudson River Aquatic Ecology Studies--Bowline Point and Lovett generating stations. Vol. 2, Chap. 9, pp. 10-15.

Lawler, Matusky & Skelly, Engineers. 1974. Hudson River Aquatic Ecology Studies--Bowline Point and Lovett generating stations. Vol. 3, Chap. 4, Secs. A-F.

CHAPTER 6: IMPINGEMENT SURVIVAL

6.1 INTRODUCTION

Impingement of fish and other large organisms on the intake screens designed to remove debris from the circulating water is one of the major potential impacts of once-through cooling at electric generating stations. The biological impact of the impingement process will depend upon the numbers of fish impinged and upon the mortality resulting from the impingement process. Studies were conducted during peak impingement seasons (January through April and November and December 1976).

The condenser cooling water system at Bowline Point Generating Station includes three circulating water pumps for each of the two units. These pumps can be operated individually or in combination. The flow of water induced by this system approaches the bar racks built across the entrance of the intake structure. Fish and debris that pass through the bar racks strike against 9.5-mm mesh vertical traveling screens. The screens rotate upward, and the fish and debris impinged on the screens are washed into a sluiceway by high- and low-pressure washdown nozzles that can be operated on a continuous or an intermittent schedule (or mode of operation). The sluiceway gravity feeds into the impingement collection pit; organisms are returned to the pond through the screenwash discharge pipe. A baffle system retains large pieces of debris in the impingement collection pit.

Impingement survival studies were conducted to determine the mortality of white perch, striped bass, Atlantic tomcod, and the herrings resulting from the impingement process. Collections were made at the impingement collection pit and at the discharge pipe. Initial and latent (96 to 108 hours)

survival were examined to determine the overall effects of the impingement process. From January through April 1976, studies were conducted during continuous screen washes with a pressure of 30 psi. In November and December, survival of impinged fish was studied during continuous and intermittent screen washes at high (60 psi) and low (15 to 20 psi) screenwash pressures. The sampling regime, with associated screenwash operating modes, is presented below:

Day	Sampling Period (hours)	Operating Mode	Pressure
1	1700-2300	Continuous	High
	2300-0500	Continuous	Low
2	1700-2300	Intermittent	High
	2300-0500	Intermittent	Low

Temperature, conductivity, dissolved oxygen, and pH were monitored during the sample collections and during the latent survival observations. This would allow the determination of any correlation between survival of impinged fish and ambient physical-chemical conditions.

6.2 METHODS AND MATERIALS

Fish were collected in the impingement collection pit at 15-to-30-minute intervals, depending on the number of fish present and the amount of debris being impinged with the fish (Figure 6.2-1). Latent survival observations were timed from the termination of sample collections taken from January through April and from the mid-point of two-hour composite samples collected in November and December.

Fish for impingement survival studies from the impingement collection pit were collected in a 0.5-in. knotless nylon mesh bag suspended between two aluminum poles. This net was secured with S-hooks to a steel mesh basket with 0.5-in. knotless netting sewn into the frame. The steel mesh basket fit into the collection pit and gave support to the collection apparatus. At the end of each collection interval, the bag net was removed and placed in a shallow trough filled with approximately 4 in. of water. As soon as the collection net was removed, a second collection net was installed immediately to ensure minimum loss of impinged fish. Any fish missed by this collection method were retained in the steel-mesh basket with net liner, and served as a check on the sampling efficiency of the net collection device. In November and December, the collection net was modified to collect fish impinged at Unit 1 separately from fish impinged at Unit 2.

Fish for impingement survival studies at the screenwash discharge pipe were collected in a 0.5-in. knotless mesh hoop net. The neck of the net was fitted over the mouth of the screenwash discharge pipe with a draw-string closure to prevent loss of fish between the pipe and the hoop net. At the termination of the sampling period, the hoop net was lowered to clear the

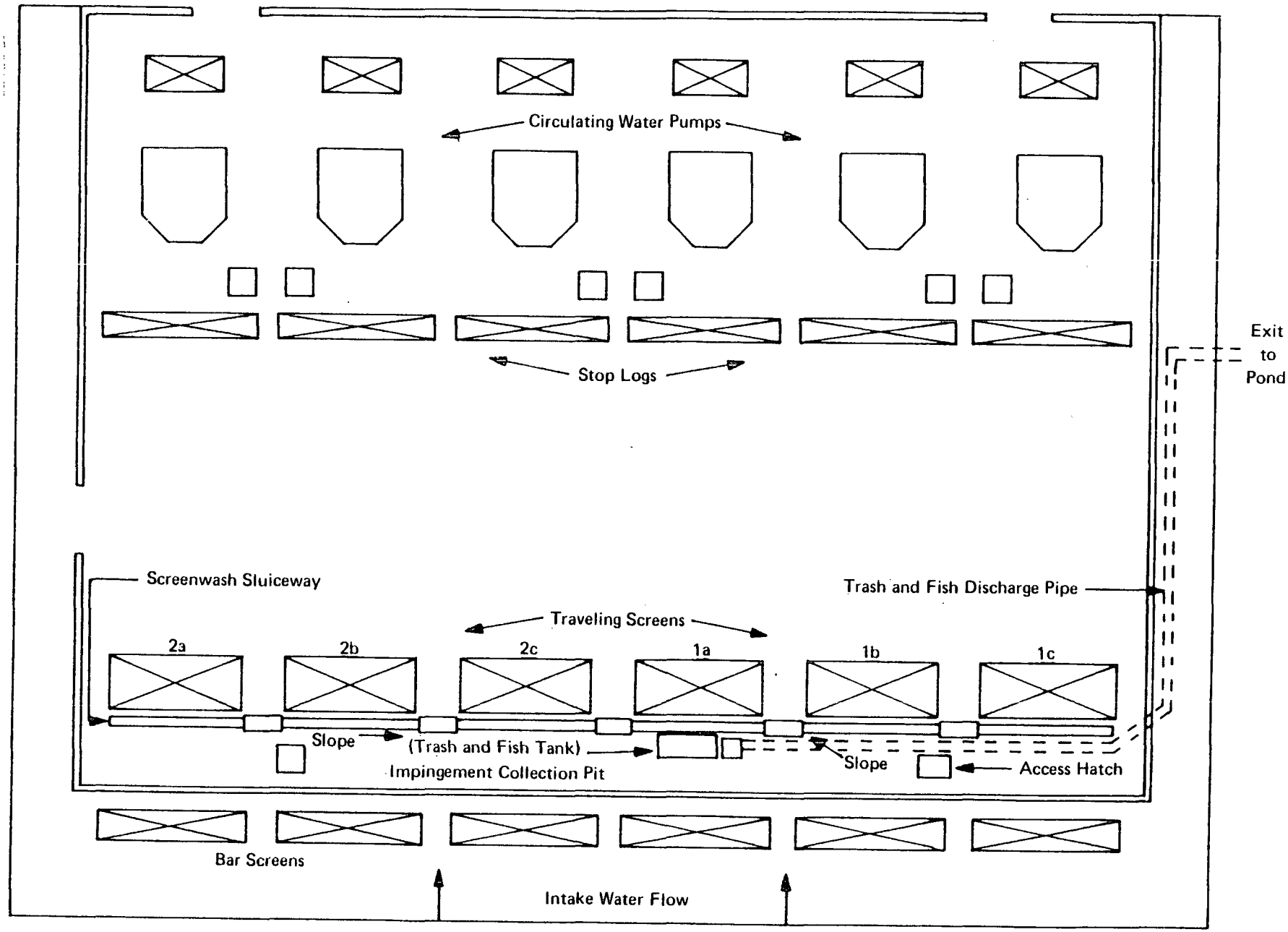


Figure 6.2-1. Schematic of the Bowline Point Generating Station intake structure.

mouth of the screenwash discharge pipe. The draw-string was tightened completely around the neck of the net and the entire hoop net was raised to release the fish from the bottom draw-string closure into rectangular plastic transport containers.

For both collection methods, sorting of fish occurred immediately. All live or stunned* fish were removed first and placed in a rectangular plastic transport container (2 x 1.5 x 1 ft deep) filled with river water. Any dead fish were then removed, speciated, and measured. All fish captured in each collection were speciated and their initial conditions recorded.

Live and stunned fish were transferred to the latent effects flow-through holding facility and placed in plastic containers (similar to the transport containers) with windows of one-sixteenth-in. nylon mesh on four sides to allow flow-through of water. The number of fish held in an individual container was dependent on the size of the fish: 20 to 34 smaller fish (young of the year) or 5 to 15 larger fish (yearlings and adults). Live fish were held separately from stunned fish. When a holding container had been filled with a sufficient number of fish, it was partially covered to reduce unnecessary disturbances to the fish. It was also labeled to indicate the number of each species and the initial condition of the fish in the container. All dead fish observed during the latent effects intervals and any fish alive at the 96- to 108-hour interval were removed, measured, and preserved. Latent effects observations for the impingement survival studies conducted from January through April were made at 6-, 12-, 24-, 36-, 48-,

* Fish were classified as "live" or "stunned" according to the following criteria: "live" fish are able to maintain equilibrium and exhibit normal swimming behavior; "stunned" fish are unable to maintain equilibrium.

and 96-hour intervals. Latent effects observations for the impingement survival studies conducted in November and December were made at 12-, 24- or 36-, 48- or 60-, and 96- or 108-hour intervals. Individual measurements were made on fish collected from January through April. In November and December, each fish was classified as either young of the year, yearling, or adult according to established length-weight relationships.* Temperature, pH, conductivity, and dissolved oxygen were monitored in the holding facility during each latent effects observation.

From January through April, the latent effects holding facility consisted of two 4-x-4-x-2-ft deep tanks and a 2-x-12-x-1.5-ft deep tank. Water was pumped into the tanks and drained over a top chute containing a screen to retain any fish that may have escaped from the individual holding containers. The tanks were held inside the laboratory trailer during the January and February studies. They were moved outside for the last three studies and a chicken wire cover was placed over all the holding containers to eliminate the possibility of seagulls feeding on any dead fish. In November and December, the holding facilities were expanded to six 2-x-4-x-2-ft deeptanks, tanks, one 2-x-12-x-1.5-ft deep tank, and one 2-x-8-x-2-ft deep tank, which were installed in the laboratory trailer. In addition, 12 cylindrical tanks (3 ft in diameter and 2 ft deep) with darkened interiors were used to hold clupeids. River water was circulated through the tanks with two 1 HP Gould pumps. Flow was sufficient to provide a complete turnover of water in the system every 6 minutes. Figure 6.2-2 is a schematic of the entire impingement holding facility.

---

* Length classifications were established from age-growth literature on each species studied and length data of fish impinged at Roseton and Bowline Point generating stations in recent seasons.

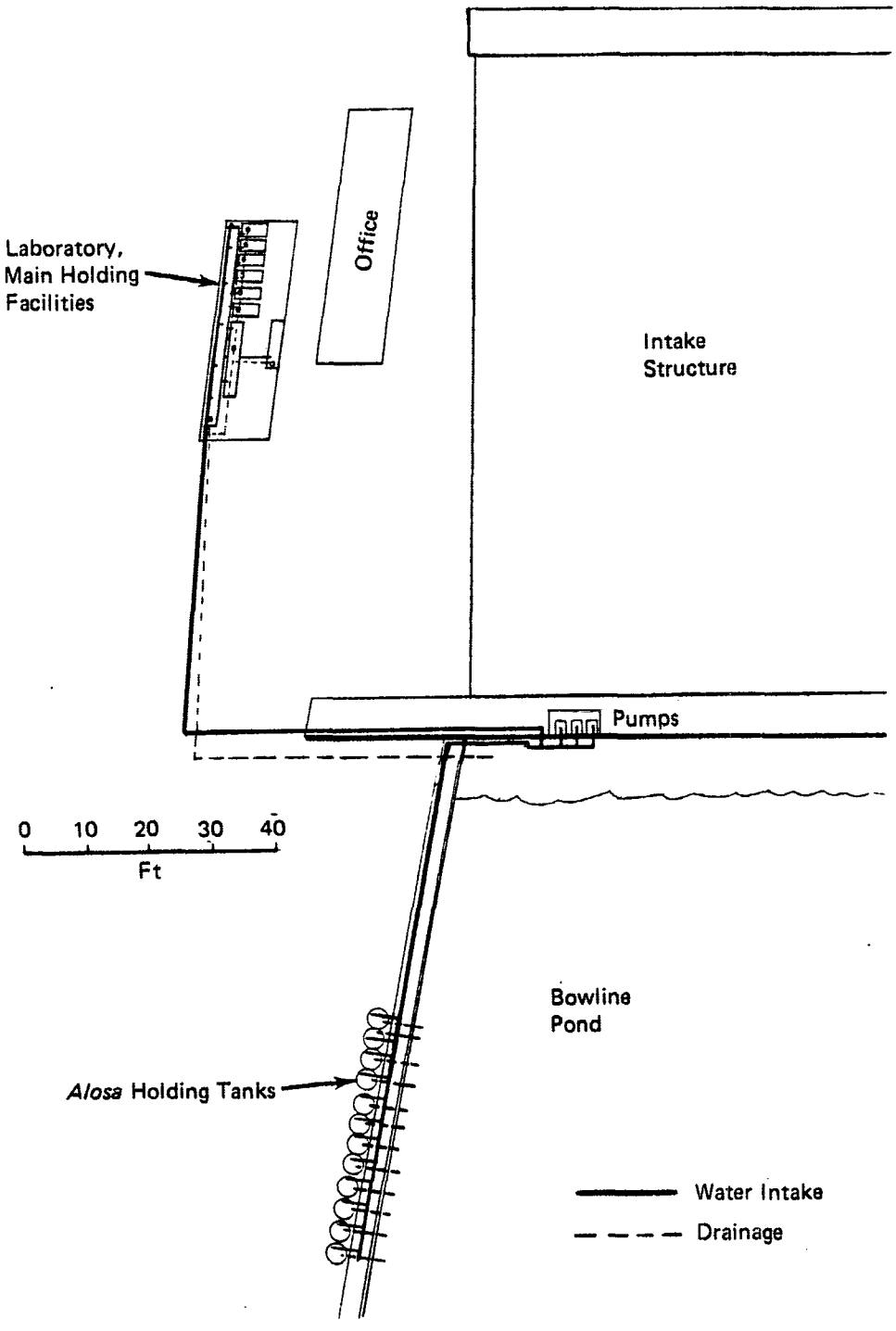


Figure 6.2-2. Flow-through holding facility for impingement survival studies at the Bowline Point plant.

Controls were used to determine the mortality resulting from sample collection and holding stresses. Control fish were collected by electroshocking, trap netting, seining, and trawling. Emphasis was placed on the collection of fish similar in size to those being impinged. Control fish used at the collection pit were identified by a caudal fin clip and gently inserted into the collection net with the flow of screenwash water into the collection pit. The fish were held in the collection net for a period of time corresponding to that for impingement sample collections (i.e., 15 to 30 minutes). Control fish used for the screenwash discharge pipe collections were introduced to the collection net through a hole located near the end of the discharge pipe. These fish were held in the discharge pipe net for the duration of the impingement sample collection. Control fish were sorted and transferred to the holding facility in the same manner as impinged fish.

6.3 RESULTS AND DISCUSSION

White perch in their first year of life accounted for over 90 percent of the total number of fish collected during the impingement survival studies (Table 6.3-1).

Fish were collected during a continuous screenwash mode of operation from January through April, with mean screenwash pressures restricted to a narrow range of 30-36 psi. The effects of both continuous and intermittent screenwash operation on survival of impinged fish were tested in the November and December studies at low (10-20 psi) and high (40-50 psi) screenwash pressures (Table 6.3-2). Differences in the temperature and conductivity in Bowline Pond (Section 1.2) during the individual survival studies were reflected in the physicochemical conditions measured in the flow-through holding facilities. These measurements are summarized in Table 6.3-3. Temperature during the studies ranged from 0.6 to 9.9 C, and conductivity ranged from 120 to 1,625 μmho.

6.3.1 Survival Observed at the Impingement Collection Pit and Discharge Pipe

Initial and latent survival of each species at the impingement collection pit is shown in Table 6.3-4. Initial survival was generally high (60-100 percent) for all species except the clupeids, which had initial values ranging from 0 to 100 percent. Latent mortalities result from the combined effects of the impingement process, possible debilitation prior to impingement, and the experimental stresses of sample collection, sorting, and holding. Latent survival (96-hour) was highest for Atlantic tomcod. All of the 58 tomcod collected at the impingement pit were alive initially, and none died within the latent effects study period.

TABLE 6.3-1 TOTAL NUMBER OF EACH SPECIES OF FISH COLLECTED FOR IMPINGEMENT SURVIVAL STUDIES AT THE BOWLINE POINT PLANT, 1976

Species	Number Collected	Percent of Total
White perch	11,043	89.5
Striped bass	936	7.6
Clupeids	210	1.7
Atlantic tomcod	65	0.5
Gizzard shad[a]	78	0.7

(a) Survival of gizzard shad was studied only during the period from January to April. Number collected and percent of total are for that time period only.

TABLE 6.3-2 SCREENWASH OPERATING CONDITIONS DURING IMPINGEMENT SURVIVAL STUDIES AT THE BOWLINE POINT PLANT, 1976

Date	Hour	Mode[a]	Water Pressure at Traveling Screens (psi)					
			1C	1B	1A	2C	2B	2A
8 JAN	1005-1305	C-H	37	37	30	31	31	34
8 JAN	1405-1705	C-H	37	38	31	32	31	35
17 FEB	2000-2305	C-H	32	34	30	Not in operation		
29 MAR	1600-1730	C-H	40	29	37	39	39	32
1 APR	1225-1505	C-H	31	32	33	32	32	--
15 APR	1330-1350	C-H	33	28	--	30	30	--
1 NOV	2000-2300	C-H	0	51	47	47	49	47
1-2 NOV	2300-0500	C-L	0	39/13	38/16	36/10	40/11	37/13
2 NOV	1800-2300	I-H	0	57	55	53	57	54
2-3 NOV	2300-0500	I-L	0	55/15	53/15	51/16	55/15	53/16
8 NOV	1700-2300	C-L	0	53/15	51/17	49/15	53/15	51/15
8-9 NOV	2300-0500	C-H	0	50	49	46	50	48
9 NOV	1700-2300	I-L	0	55/15	53/14	51/11	57/15	53/18
9-10 NOV	2300-0500	I-H	0	57	55	53	57	55
15 NOV	1700-2300	C-H	0	51	50	47	51	49
15-16 NOV	2300-0500	C-L	0	48/14	45/12	44/10	48/13	46/12
16 NOV	1700-2300	I-H	0	55	53	51	55	52
16-17 NOV	2300-0500	I-L	0	--	--	--	--	--
2 DEC	1700-2300	C-L	0	52/14	50/15	48/15	53/14	
2-3 DEC	2300-0500	C-H	0	41	40	38	41	40*
3 DEC	1700-2300	I-L	0	53/20	52/18	50/20	54/20	51/0*
3-4 DEC	2300-0500	I-H	0	55	54	50	56	53
6 DEC	1700-2300	C-H	0	26	26	25	27	25
6-7 DEC	2300-0500	C-L	0	25/12	24/12	22/13	24/14	0/0
7 DEC	1700-2300	I-H	0	55	54	51	55	52
7-8 DEC	2300-0500	I-L	0	54/18	52/16	50/18	54/18	52/0
13 DEC	1700-2300	C-L	0	33/13	34/14	32/13	33/12	34/0
13-14 DEC	2300-0500	C-H	0	33	34	32	33	33
14 DEC	1700-2300	I-L	0	52/17	53/19	51/16	51/13	0/0
14-15 DEC	2300-0500	I-H	0	61	62	60	61	0

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

Note: * indicates Screen 2A not rotated.

TABLE 6.3-3 SUMMARY OF PHYSICOCHEMICAL MONITORING OF IMPINGEMENT SURVIVAL HOLDING FACILITIES OF THE BOWLINE POINT PLANT, 1976

Sampling Date	Observation	Temp. (C)	Cond. (µmho)	DO (mg/liter)	pH
8 JAN	Initial	1.0	--	14.9	7.7
	6-hr	0.9	--	14.9	7.7
	12-hr	0.6	150	5.4	7.7
	24-hr	0.8	--	16.5	--
	96-hr	0.8	320	15.9	7.5
8 JAN	Initial	1.1	--	15.4	7.6
	6-hr	0.7	--	15.3	7.7
	12-hr	0.5	150	16.7	7.3
	24-hr	0.6	155	16.6	--
	48-hr	0.8	185	17.5	6.4
	96-hr	1.0	320	16.2	6.0
17 FEB	Initial	--	--	--	--
	6-hr	2.7	270	14.5	7.5
	12-hr	2.5	200	14.9	7.5
	24-hr	2.9	190	14.0	7.5
	48-hr	3.5	150	14.4	7.4
	96-hr	3.7	100	13.7	7.1
29 MAR	Initial	7.7	140	12.0	7.6
	72-hr	8.9	130	10.9	7.3
	96-hr	8.0	125	11.0	7.7
1 APR	Initial	8.9	140	12.0	7.6
	24-hr	8.1	135	11.0	7.5
	48-hr	8.1	145	10.9	7.5
	72-hr	7.9	140	10.9	7.7
1 NOV	Initial	9.8	150	10.1	--
	12-hr	9.4	140	10.4	--
	24-hr	9.7	140	10.6	--
	48-hr	9.9	138	10.5	7.4
	96-hr	9.4	120	10.2	7.8
1-2 NOV	Initial	9.8	150	10.4	--
	12-hr	9.8	145	10.6	--
	24-hr	9.6	137	10.6	--
	48-hr	9.8	130	10.7	8.1
	96-hr	9.3	130	10.1	7.8
2 NOV	Initial	9.8	140	10.4	--
	12-hr	9.5	140	10.5	--
	24-hr	9.9	130	10.6	--
	48-hr	10.4	125	10.2	7.6
	96-hr	8.9	118	10.5	7.0
2-3 NOV	Initial	9.6	140	10.6	--
	12-hr	9.8	140	10.6	--
	24-hr	9.8	130	10.9	8.1
	48-hr	9.9	120	10.0	8.2
	96-hr	8.8	120	11.0	7.3

TABLE 6.3-3 (CONT.)

Sampling Date	Observation	Temp. (C)	Cond. (μmho)	DO (mg/liter)	pH
8 NOV	Initial	7.4	128	11.6	--
	12-hr	6.8	125	11.2	--
	24-hr	6.9	133	11.6	--
	48-hr	7.4	120	10.5	--
	96-hr	7.3	155	10.8	8.3
8-9 NOV	Initial	7.0	123	10.9	--
	12-hr	6.9	122	11.4	--
	24-hr	6.8	123	11.1	--
	48-hr				--
	96-hr	7.2	138	10.8	7.5
9 NOV	Initial	6.8	130	11.5	--
	12-hr	6.7	123	11.4	--
	24-hr	7.4	120	11.0	--
	48-hr	7.8	140	10.7	7.8
	96-hr	7.6	160	11.0	8.0
9-10 NOV	Initial	6.8	120	11.1	--
	12-hr	7.6	125	10.7	--
	24-hr				--
	48-hr	7.3	135	10.7	--
	96-hr	7.2	130	10.8	7.8
15 NOV	Initial	7.1	150	10.7	7.6
	12-hr	7.0	160	11.0	7.4
	24-hr	7.4	215	10.5	7.5
	48-hr	7.8	335	10.6	7.9
	96-hr	7.7	1,542	10.2	8.0
15-16 NOV	Initial	7.0	148	10.4	7.5
	12-hr	7.5	175	10.9	7.1
	24-hr	7.2	240	10.4	8.0
	48-hr	7.4	395	10.7	7.6
	96-hr	7.2	1,625	10.2	7.9
16 NOV	Initial	7.3	200	10.5	7.5
	12-hr	7.4	285	10.5	8.0
	24-hr	7.8	295	10.5	7.8
	48-hr	7.6	965	10.5	8.0
	96-hr	6.8	1,580	10.4	8.0
16-17 NOV	Initial	7.1	240	10.4	7.8
	12-hr	7.6	280	10.5	7.4
	24-hr	7.3	390	10.8	7.4
	48-hr	7.1	970	10.3	7.8
	96-hr	6.8	1,575	10.3	7.9
2 DEC	Initial	5.0	1,087	11.2	7.9
	12-hr	3.9	1,020	11.4	7.7
	24-hr	3.7	1,122	11.3	7.3
	48-hr	3.5	870	11.0	7.4
	96-hr				

TABLE 6.3-3 (CONT.)

Sampling Date	Observation	Temp. (C)	Cond. (µmho)	DO (mg/liter)	pH
2-3 DEC	Initial	4.7	1,095	11.0	7.5
	12-hr	3.9	1,030	13.3	7.7
	24-hr	3.6	1,110	13.0	7.2
	48-hr	3.8	873	11.0	7.4
	96-hr				
3 DEC	Initial	3.9	1,087	12.1	7.7
	12-hr	3.6	1,125	11.0	7.3
	24-hr	3.5	870	10.9	7.3
	48-hr	4.0	850	11.8	8.1
	96-hr	4.5	1,073	11.3	7.8
3-4 DEC	Initial	3.5	1,085	11.2	7.4
	12-hr	3.8	1,083	11.2	7.3
	24-hr	4.1	870	11.0	7.3
	48-hr	4.2	850	11.1	7.0
	96-hr	4.1	1,360	11.1	7.1
6 DEC	Initial	4.0	895	11.1	7.6
	12-hr	4.4	943	11.0	7.9
	24-hr	3.0	588	11.3	7.5
	48-hr	2.7	475	11.3	7.4
	96-hr	2.7	280	11.7	8.3
6-7 DEC	Initial	4.3	913	10.9	7.8
	12-hr	4.5	1,020	11.3	7.8
	24-hr	3.4	727	11.3	7.5
	48-hr	2.8	460	11.9	7.4
	96-hr	7.5	300	11.6	--
7-8 DEC	Initial	4.4	1,185	11.1	7.6
	12-hr	3.5	863	11.2	7.6
	24-hr	2.7	470	11.4	7.7
	48-hr	2.7	260	12.0	7.2
	96-hr	3.5	175	--	7.8
8 DEC	Initial	4.2	1,258	11.5	7.9
	12-hr	3.5	773	11.2	7.4
	24-hr	3.3	482	11.4	7.5
	48-hr	3.0	250	11.7	7.3
	96-hr				7.8
13 DEC	Initial	1.6	337	12.6	7.6
	12-hr	1.4	333	12.9	6.8
	24-hr	1.3	265	12.6	6.7
	48-hr	2.9	240	12.3	6.9
	96-hr	2.7	510	12.3	7.3
13-14 DEC	Initial	1.1	488	12.7	7.4
	12-hr	1.7	510	12.8	6.7
	24-hr	1.6	420	12.5	7.7
	48-hr	2.5	190	12.7	7.4
	96-hr	2.7	540	12.4	7.5
14 DEC	Initial	1.4	325	12.6	6.8
	12-hr	1.7	403	12.5	6.8
	24-hr	2.7	223	12.4	7.1

TABLE 6.3-3 (CONT.)

Sampling Date	Observation	Temp. (C)	Cond. (umho)	DO (mg/liter)	pH
	48-hr	3.6	193	12.5	7.4
	96-hr	2.5	487	12.2	7.1
14-15 DEC	Initial	2.1	604	12.6	7.3
	12-hr	3.4	480	12.3	7.5
	24-hr	2.5	190	12.7	7.4
	48-hr	2.8	242	12.7	7.7
	96-hr	2.6	490	12.3	7.3

TABLE 6.3-4 IMPINGEMENT SURVIVAL AT THE BOWLINE POINT PLANT COLLECTION PIT SAMPLES, 1976

Date	Mode[a]	No. of Fish	Percent Survival					
			Initial	6-hr	12-hr	24-hr	48-hr	96-hr
			White Perch					
Units 1 and 2								
8 JAN	C-H	7	57	57	57	57	43	43
17 FEB	C-H	31	97	93	84	84	61	35
29 MAR	C-H	55	63	--	--	15	11	7
1 APR	C-H	106	100	--	--	36	15	9
15 APR	C-H	115	97	--	97	97	90	62
1 NOV	C-H	27	78	--	33	30	26	22
2 NOV	C-L	42	71	--	33	21	10	7
2 NOV	I-H	16	69	--	25	25	13	13
3 NOV	I-L	30	70	--	10	3	3	3
8 NOV	C-L	65	91	--	78	65	54	48
9 NOV	C-H	79	95	--	72	54	44	37
9 NOV	I-L	39	69	--	26	23	18	18
10 NOV	I-H	81	70	--	47	14	12	11
15 NOV	C-H	101	85	--	64	62	56	55
16 NOV	C-L	243	98	--	85	78	69	68
16 NOV	I-H	28	75	--	54	43	36	29
17 NOV	I-L	43	84	--	31	24	19	16
Unit 1								
2 DEC	C-L	386	94	--	81	80	78	74
3 DEC	C-H	488	94	--	73	70	65	57
3 DEC	I-L	583	85	--	71	59	50	32
4 DEC	I-H	618	86	--	64	44	42	31
6 DEC	C-H	1,168	98	--	85	85	84	82
7 DEC	C-L	299	100	--	83	78	77	71
7 DEC	I-H	299	95	--	74	60	48	37
8 DEC	I-L	431	97	--	67	55	37	22
13 DEC	C-L	809	97	--	69	35	18	8
14 DEC	C-H	306	95	--	70	41	32	27
14 DEC	I-L	155	85	--	69	11	7	3
15 DEC	I-H	297	94	--	63	20	10	8

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

TABLE 6.3-4 (CONT.)

Date	Mode[a]	No. of Fish	Percent Survival Initial	6-hr	12-hr	24-hr	48-hr	96-hr
White Perch (Cont.)								
Unit 2[b]								
2 DEC	C-L	800	98.8	--	82	80	80	75
7 DEC	C-L	506	99.6	--	92	90	90	87
13 DEC	C-L	551	98.9	--	57	22	12	4
Striped Bass								
Units 1 and 2								
8 JAN	C-H	4	50	25	25	25	0	0
17 FEB	C-H	31	100	84	74	48	23	13
29 MAR	C-H	3	67	0	0	0	0	0
15 APR	C-H	7	100	--	57	57	14	14
1 NOV	C-H	1	100	--	100	100	100	100
8 NOV	C-H	4	75	--	25	25	25	25
15 NOV	C-H	1	100	--	100	100	100	100
Unit 1								
2 DEC	C-L	11	91	--	91	78	78	78
3 DEC	C-H	18	89	--	83	78	78	78
3 DEC	I-L	28	96	--	81	59	46	37
4 DEC	I-H	41	80	--	77	43	38	35
6 DEC	C-H	87	100	--	100	100	100	100
7 DEC	C-L	46	76	--	76	69	51	51
7 DEC	I-H	39	97	--	76	51	46	42
8 DEC	I-L	52	96	--	70	37	37	18
13 DEC	C-L	102	96	--	67	43	25	18
14 DEC	C-H	25	96	--	72	34	24	10
14 DEC	I-L	84	93	--	47	8	4	4
15 DEC	I-H	25	92	--	55	12	6	6
Unit 2[b]								
2 DEC	C-L	19	100	--	100	100	100	100
7 DEC	C-L	69	100	--	95	95	95	92
13 DEC	C-L	35	100	--	48	28	12	12

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

(b) Fish from Unit 2 were speciated and counted, and initial survival was recorded. Latent effects observations were conducted only when the screenwash mode was "continuous low" (C-L).

TABLE 6.3-4 (CONT.)

Date	Mode[a]	No. of Fish	Percent Survival					
			Initial	6-hr	12-hr	24-hr	48-hr	96-hr
Clupeids								
Units 1 and 2								
8 JAN	C-H	7	71	29	14	0	0	0
17 FEB	C-H	8	100	13	0	0	0	0
1 NOV	C-H	19	63	--	0	0	0	0
2 NOV	C-L	29	76	--	0	0	0	0
2 NOV	I-H	12	25	--	0	0	0	0
3 NOV	I-L	3	33	--	0	0	0	0
8 NOV	C-L	14	29	--	0	0	0	0
9 NOV	C-H	49	69	--	20	20	20	18
9 NOV	I-L	17	24	--	0	0	0	0
10 NOV	I-H	14	0	--	0	0	0	0
15 NOV	C-H	5	60	--	0	0	0	0
16 NOV	C-L	3	33	--	0	0	0	0
16 NOV	I-H	1	100	--	0	0	0	0
Unit 1								
2 DEC	C-L	1	100	--	0	0	0	0
3 DEC	C-H	1	100	--	0	0	0	0
3 DEC	I-L	1	100	--	0	0	0	0
4 DEC	I-H	1	0	--	0	0	0	0
13 DEC	C-L	1	0	--	0	0	0	0
14 DEC	I-L	1	0	--	0	0	0	0
Unit 2[b]								
2 DEC	C-L	3	0	--	0	0	0	0
Atlantic Tomcod								
Units 1 and 2								
3 NOV	I-L	1	100	--	100	100	100	100
10 NOV	I-H	1	100	--	100	100	100	100
16 NOV	I-H	1	100	--	100	100	100	100

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

(b) Fish from Unit 2 were speciated and counted, and initial survival was recorded. Latent effects observations were conducted only when the screenwash mode was "continuous low" (C-L).

TABLE 6.3-4 (CONT.)

Date	Mode[a]	No. of Fish	Percent Survival Initial	6-hr	12-hr	24-hr	48-hr	96-hr
Atlantic Tomcod (Cont.)								
Unit 1								
3 DEC	C-H	3	100	--	100	100	100	100
4 DEC	I-H	1	100	--	100	100	100	100
7 DEC	I-H	1	100	--	100	100	100	100
8 DEC	I-L	2	100	--	100	100	100	100
13 DEC	C-L	2	100	--	100	100	100	100
15 DEC	I-H	2	100	--	100	100	100	100
Unit 2[b]								
2 DEC	C-L	1	100	--	100	100	100	100
7 DEC	C-L	1	100	--	100	100	100	100
13 DEC	C-L	42	100	--	100	100	100	100
Gizzard Shad								
8 JAN	C-H	48	98	50	13	0	0	0
17 FEB	C-H	27	100	89	44	15	0	0
29 MAR	C-H	3	67	0	0	0	0	0

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

(b) Fish from Unit 2 were speciated and counted, and initial survival was recorded. Latent effects observations were conducted only when the screenwash mode was "continuous low" (C-L).

Latent survival of white perch and striped bass varied widely among sample collection dates (0-100 percent). However, survival of striped bass at 96 hours was not statistically different from that of white perch.*

The majority of the latent mortality for white perch and striped bass occurred within the first 24-48 hours following impingement. Figure 6.3-1 shows survival curves typically obtained for impinged white perch.

Clupeids died within 24 hours of collection in all samples except the continuous screenwash test of 9 November.

Attempts were made to obtain control fish of a size approximately equivalent to those being impinged. Most success was achieved by trawling in Bowline Pond or by collecting fish from the screenwash sluiceway. Control fish were held for at least 72 hours prior to use and only individuals of healthy appearance were included in control groups. Sample size was insufficient to provide a reasonable estimate of control survival during the 15-17 November sampling period. The anomalously low latent survival obtained for the control groups on 6-8 December may have resulted from the relatively long time (8 days) for which these fish were held prior to use as controls (Table 6.3-5). Further studies will be conducted in the spring of 1977 to more accurately determine the effect of collection, handling, and latent effects holding on survival.

Control survival data collected to date indicate that these procedures probably account for a significant portion of the mortality observed in impingement collections of white perch and striped bass.

* Paired t-test on all samples listed in Table 6.3-4 having more than 10 organisms ($df = 15$, $t = 0.76$, $\alpha = 0.05$).

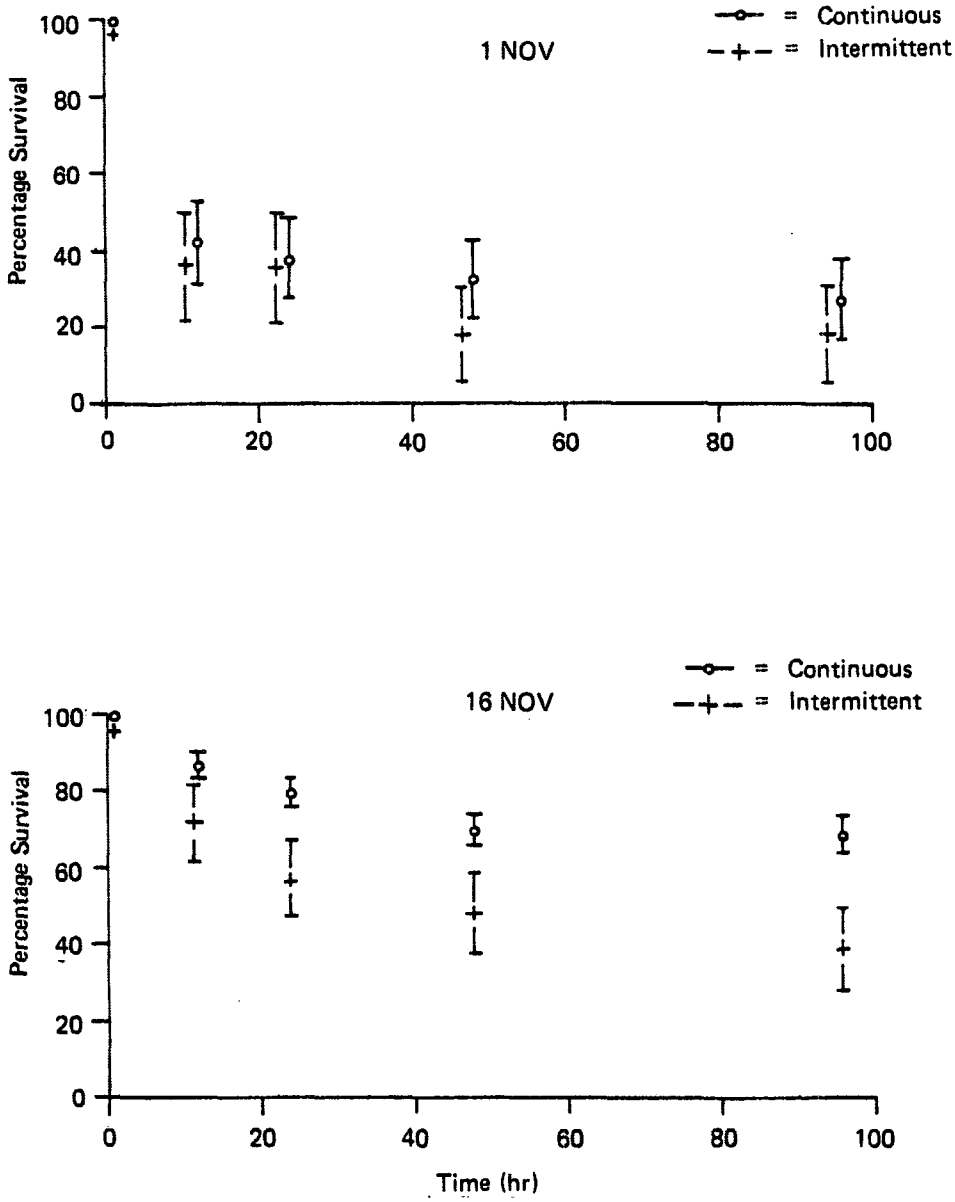


Figure 6.3-1. Latent survival curves for white perch impinged at the Bowline Point plant intake on 2 November and 16 November 1976.

TABLE 6.3-5 SURVIVAL OF CONTROLS--BOWLINE POINT GENERATING STATION IMPINGEMENT COLLECTION PIT

Date	No. of Fish	Percent Survival				
		Initial	12-hr	24-hr	48-hr	96-hr
White perch						
1- 2 NOV	28[a]	100	86	86	86	86
8-10 NOV	66	84	64	56	53	50
15-17 NOV	12	92	33	33	25	8
2- 3 DEC	22	100	95	95	95	95
6- 8 DEC	83	100	38	31	28	19
13-15 DEC	119	100	67	39	34	23
Striped bass						
2 NOV	5	100	100	100	80	40
7- 8 DEC	4	100	25	25	25	25
13-15 DEC	26	100	73	27	23	15
Clupeids						
8-10 NOV	35	83	9	9	0	0
15 NOV	5	80	0	0	0	0
Atlantic tomcod						
13-14 DEC	3	100	100	100	100	100

(a) Yearling and adults--white perch used for controls on all other dates were young of the year.

Survival of fish collected at the exit of the sluiceway discharge pipe showed the same relative sensitivity among species as the impingement collection pit samples. All of the Atlantic tomcod survived through 96 hours. The white perch and striped bass had somewhat lower and more variable survival. None of the 20 clupeids survived to the 12-hour check. Impingement survival for discharge pipe samples is summarized in Table 6.3-6. Survival of white perch and striped bass were generally lower than that in the collection pit samples. However, survival of controls from the discharge pipe collections was also lower than that from collection pit controls (Table 6.3-7). High sampling mortality at the sluiceway discharge pipe is probably caused by at least these factors: (1) the time delay and abrasion of fish during removal of the collection net from the end of the discharge pipe (which is submerged 2-5 ft below the pond surface depending upon the tidal stage), (2) longer sampling times (0.5-3.0 hours), and (3) impingement of fish against the collection net by the high velocity discharge of water from the end of the pipe (which was less than 2 ft above the bottom of the collection net during sampling).

6.3.2 Effects of Screenwash Operating Mode

The study was designed to test the effect of screenwash frequency and pressure on survival of impinged fish. Screenwash operating modes in effect for each sample collection date have been summarized in Table 6.3-2.

Initial and latent survival of white perch collected during intermittent screenwash was significantly lower than for those collected when the traveling screens were continuously washed (Table 6.3-8). The lower initial survival observed during intermittent screen wash is presumably caused by impingement and suffocation on the screens in the period between screen-

TABLE 6.3-6 IMPINGEMENT SURVIVAL AT THE BOWLINE POINT PLANT DISCHARGE PIPE SAMPLES, 1976

Date	Mode[a]	No. of Fish	Percent Survival					
			Initial	6-hr	12-hr	24-hr	48-hr	96-hr
White perch								
8 NOV	C-L	44	82	--	9	2	2	2
9 NOV	I-L	13	39	--	15	0	0	0
15 NOV	C-H	90	73	--	11	7	4	0
16 NOV	C-L	15	100	--	87	80	67	67
2 DEC	C-L	189	99	--	55	33	26	19
3 DEC	C-H	136	88	--	41	16	15	13
3 DEC	I-L	368	96	--	72	55	50	21
6 DEC	C-H	126	99	--	60	55	53	47
7 DEC	C-L	26	100	--	81	0	0	0
7 DEC	I-H	327	95	--	52	41	30	15
8 DEC	I-L	367	98	--	63	19	0.3	0.3
14 DEC	C-H	38	95	--	63	0	0	0
14 DEC	I-L	218	97	--	50	6	3	3
15 DEC	I-H	282	87	--	53	10	5	5
Striped bass								
8 NOV	C-L	1	100	--	0	0	0	0
2 DEC	C-L	3	100	--	67	67	33	33
3 DEC	C-H	10	100	--	90	10	10	0
3 DEC	I-L	24	96	--	96	58	38	26
6 DEC	C-H	13	100	--	92	85	77	77
7 DEC	C-L	3	100	--	33	0	0	0
7 DEC	I-H	51	92	--	74	48	39	31
8 DEC	I-L	73	100	--	56	13	3	0
14 DEC	C-H	2	100	--	0	0	0	0
14 DEC	I-L	10	80	--	40	0	0	0
15 DEC	I-H	14	100	--	13	0	0	0
Atlantic tomcod								
2 DEC	C-L	1	100	--	100	100	100	100
6 DEC	C-H	1	100	--	100	100	100	100
8 DEC	I-L	3	100	--	100	100	100	100
15 DEC	I-H	2	100	--	100	100	100	100

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

TABLE 6.3-6 (CONT.)

Date	Mode[a]	No. of Fish	Percent Survival					
			Initial	6-hr	12-hr	24-hr	48-hr	96-hr
			Clupeids					
8 NOV	C-L	9	11	--	0	0	0	0
9 NOV	I-L	8	0	--	0	0	0	0
15 NOV	C-H	1	0	--	0	0	0	0
3 DEC	I-H	1	100	--	0	0	0	0
8 DEC	I-L	1	100	--	0	0	0	0

(a) C = continuous operation; I = intermittent operation; H = high pressure; L = low pressure.

TABLE 6.3-7 COMPARISON OF SAMPLING CONTROL SURVIVAL (96-hr) FOR WHITE PERCH AT THE SLUICEWAY COLLECTION PIT AND DISCHARGE PIPE

Date	Collection Pit		Discharge Pipe	
	No. of Fish	Percent Survival	No. of Fish	Percent Survival
15 NOV	5	0	10	0
2 DEC	18	100	16	31
7 DEC	16	25	8	0
8 DEC	29	3	27	44
14 DEC	34	21	27	0
14 DEC	19	16	23	4
15 DEC	31	42	23	4

TABLE 6.3-8 COMPARISON OF INITIAL AND LATENT SURVIVAL OF WHITE PERCH DURING CONTINUOUS (C) AND INTERMITTENT (I)(a) SCREENWASH OPERATION

Date	Percent Survival (Initial) C	I	I/C	Percent Survival (96-hr) C	I	I/C
1- 3 NOV*	0.78	0.69	0.87	0.22	0.13	0.59
1- 3 NOV	0.71	0.70	0.99	0.07	0.03	0.43
8-10 NOV	0.91	0.69	0.76	0.48	0.18	0.38
8-10 NOV*	0.95	0.70	0.74	0.37	0.11	0.30
15-17 NOV*	0.85	0.75	0.88	0.55	0.29	0.53
15-17 NOV	0.98	0.84	0.86	0.68	0.16	0.24
Mean Ratio			0.85			0.40
2- 4 DEC	0.94	0.85	0.90	0.74	0.32	0.43
2- 4 DEC*	0.94	0.86	0.91	0.57	0.31	0.54
6- 8 DEC*	0.98	0.95	0.97	0.82	0.37	0.45
6- 8 DEC	1.00	0.97	0.97	0.71	0.22	0.31
13-15 DEC	0.97	0.85	0.88	0.08	0.03	0.38
13-15 DEC	0.95	0.94	0.99	0.27	0.08	0.30
Mean Ratio			0.94			0.40

Paired t-Test

Initial Survival	Latent Survival
t = 4.38 df = 11	t = 5.79 df = 11
$t_{0.025}$ = 2.201	$t_{0.025}$ = 2.201

(a) Screens held stationary for 2-4 hours between washes of 10-20 minute duration.

Note: * indicates high pressure screenwash. All others are low pressure screenwash tests.

washes. The continuous operation of the screens minimizes this effect since fish falling against the screens are immediately removed and transported through the screenwash system. The results indicate that the mechanical damage to the fish from the screenwash system is small in comparison to the debilitation and death produced in front of or on the screens prior to washing.

The mean ratio (intermittent/continuous) of initial survival for the two modes of operation was higher in the December studies (0.94) than in November (0.85). The intervals between screenwashes in the November and December studies were 4 hours and 2 hours, respectively. This difference might indicate a slightly lower impingement mortality for the 2-hour mode. However, the mean ratios of 96-hour survival for the two months have identical values of 0.40. The differences between the two intermittent screenwash frequencies tested are therefore inconclusive.

Survival of white perch collected during low and high pressure screenwashes was statistically compared using the paired t-test. High and low pressure results were not significantly different ($\alpha = 0.05$) for either the continuous or intermittent modes of operation.

6.3.3 Effects of Salinity

Latent (96-hour) survival for white perch was found to be positively correlated with water conductivity at the time of the impingement survey. Long-term survival ranged from 7 to 42 percent when mean conductivity during the 96-hour study was less than 250 µmho, and was generally greater than 60 percent when conductivity exceeded 500 µmho. The relationship of latent survival of white perch and mean water conductivity during the holding

period is presented in Table 6.3-9 and illustrated in Figure 6.3-2. The relationship between long-term impingement survival for white perch and conductivity observed in this study is in general agreement with the findings of the 1974 impingement survival studies, which showed positive correlation between initial survival and chloride concentration at the Bowline site (LMS 1976).

Since white perch is the most abundant species impinged at the Bowline Point plant, quantification of the survival-salinity relationship may have particularly important implications for the assessment of impingement impact. If, for example, the peak impingement abundances of this species at Bowline Point occur concurrently with salinity intrusion at the site, impingement impact may be minimized by high survival. Much of the impingement abundance data collected at Bowline to date suggest that this may be the case (LMS 1975; EA 1976).

TABLE 6.3-9 INITIAL PROPORTION OF WHITE PERCH SURVIVING IMPINGEMENT AND ASSOCIATED CONDUCTIVITY VALUES FOR CONTINUOUS SCREENWASH OPERATION AT THE BOWLINE POINT PLANT, 1976

Conductivity[a] (μho)	Percent Survival[b] 96-hr
105	9
133	7
136	13
129	42
161	35
216	43
354	13
552	80
606	64
613	62
981	65

(a) See x-axis of Figure 6.3-2.
(b) See y-axis of Figure 6.3-2.
Percent survival = (Initial number alive + stunned)/(total number collected) x 100.

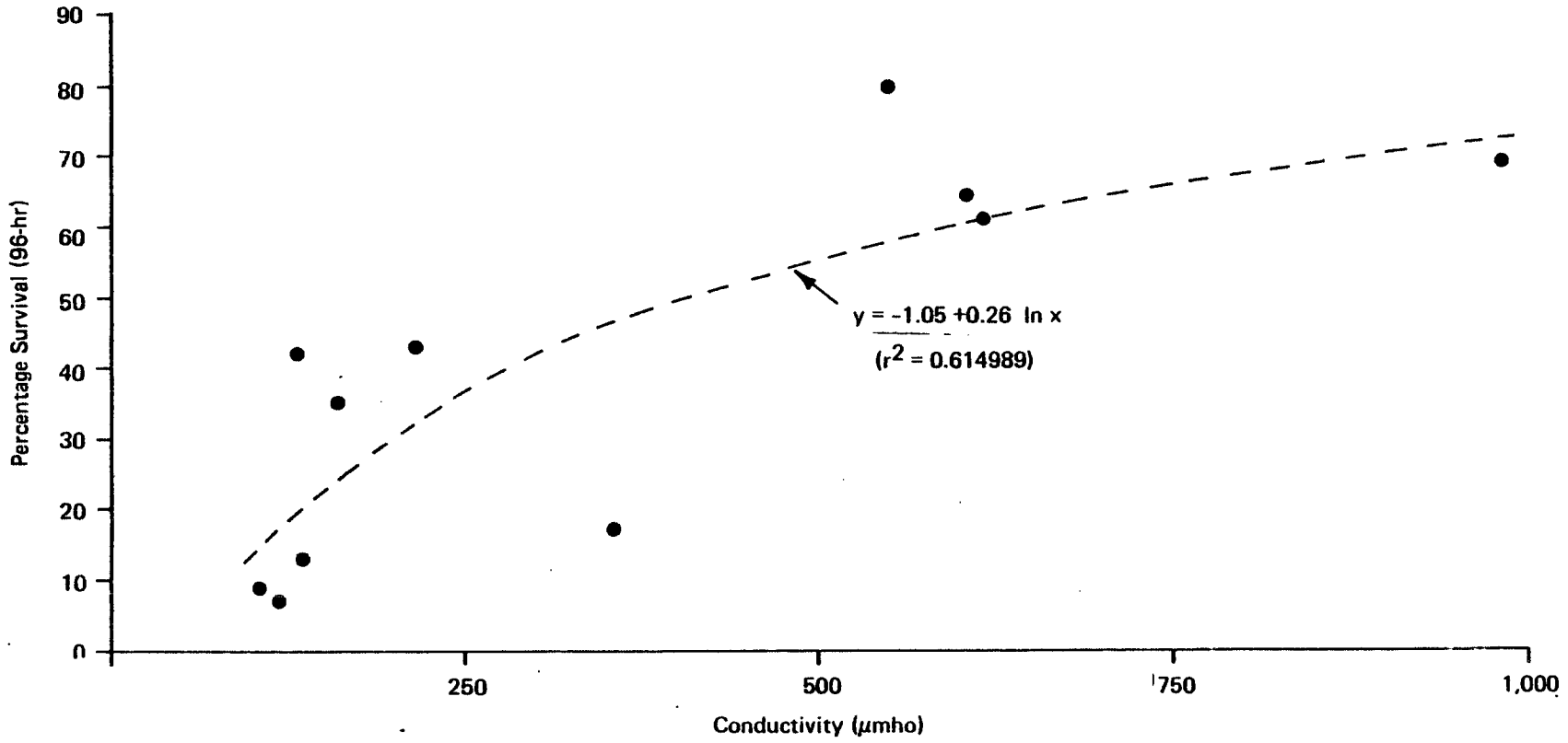


Figure 6.3-2. Relationship between long-term survival of impinged white perch and conductivity for continuous screenwash operation at the Bowline Point plant.

REFERENCES: SECTION 6.3

Ecological Analysts, Inc. 1976. Bowline Point Generating Station Impingement Recirculation and Survival Studies, November 1975 - 1976. Prepared for Orange and Rockland Utilities, Spring Valley, New York.

Lawler, Matusky & Skelly Engineers (LMS). 1976. 1974 Hudson River aquatic ecology studies--Bowline Point and Lovett Generating Stations. Lawler, Matusky & Skelly Engineers, Environmental and Engineering Consultants. Tappan, New York.

Lawler, Matusky & Skelly Engineers (LMS). 1975. 1974 Hudson River aquatic ecology studies--Bowline Point and Lovett Generating Stations. Volume I. Lawler, Matusky & Skelly Engineers, Environmental and Engineering Consultants. Tappan, New York.

APPENDIX A

ICHTHYOPLANKTON--EVALUATION OF COLLECTION TECHNIQUES USED FOR ICHTHYOPLANKTON ENTRAINMENT SURVIVAL STUDIES AT POWER PLANTS

CONTENTS

		Page
A.1	INTRODUCTION	A.1-1
A.2	METHODS AND MATERIALS	A.2-1
A.3	RESULTS AND DISCUSSION	A.3-1
A.4	DESCRIPTION OF INDIVIDUAL EXPERIMENTS	A.4-1

APPENDIX A: ICHTHYOPLANKTON--EVALUATION OF COLLECTION TECHNIQUES USED FOR ICHTHYOPLANKTON ENTRAINMENT SURVIVAL STUDIES AT POWER PLANTS

A.1 INTRODUCTION

Steam electric generating plants presently interface with the aquatic environment by withdrawing water used for condenser cooling. Nonscreenable organisms are included in this cooling water and are referred to as "pump entrained." Pump-entrained organisms are exposed to a variety of potential stresses, including rapid changes in temperature and pressure, mechanical buffeting, velocity shear forces, and chemicals which have been added to the cooling water.

Evaluation of pump entrainment effects on nonscreenable organisms, such as larval fish, necessitates adequate sampling of organisms entering and leaving the plant. Comparisons of organism survival at the plant intake and discharge sites provide information concerning the plant entrainment effect or cropping factor associated with plant operation. Power plant impact on a population of nonscreenable organisms can be determined by examining the relationship between the plant cropping factor and the natural population dynamics of the organism in question.

Review of ichthyoplankton entrainment viability state of the art indicates that little research is being performed on entrainment survival (Ecological Analysts 1976). Research groups active in this discipline most commonly utilize stationary net collection devices; however, high net-induced mortalities and poor survival are generally associated with these methods. The best method developed to date for minimizing sampling mortality involves use of a combination pump and collection device called a larval table.

The objectives of this study were to test and evaluate several sampling techniques in order to determine the best sampling methodology for data accumulation concerning ichthyoplankton entrainment survival estimation at several Hudson River power plant sites. Most experiments were conducted using a combination pump and larval table. A few experiments were conducted with a combination pump and net system. The various sampling modes were examined in terms of the sample receiving system, the pumping system, and postsampling holding system. The measure of evaluation in these studies was the survival of larval striped bass immediately after being exposed to various experimental regimes (initial survival) and the latent survival after a 96-hour holding period. Effects were evaluated on a relative basis and their magnitude estimated.

Larval survival in two types of sample receiving systems was examined. Experiments were conducted with the larval table designed by Lawler, Matusky and Skelly, Engineers, and with a large net designed by Ecological Analysts. Larval fish were placed directly into the table or net under similar test conditions and survival in the two systems was compared. The number of larvae remaining in the table or net after the various regimes was also compared to determine collection efficiency of each system. Larval survival in the table under low and high table water flow regimes was examined, in addition to determination of survival under low and high water flow rates through the collection box area. Both table and collection box water flow rate experiments were conducted to allow determination of an ideal flow rate that would minimize mortality due to screen impingement and mechanical buffeting in the larval table system.

A modification of the original larval table design was completed after preliminary analysis of experimental results obtained from the original design. The modified table included a new collection box designed to minimize the effects of sample handling on survival.

The pumping system used to supply water to the larval table and net was tested for effect on larval survival. Larvae were introduced to the system on the intake side of the pump and survival was recorded after the organisms had experienced the pump/table system. Three pump types (Midland Midwhirl pump, a 4-in., and a 3-in. trash pump) were used in the experiments. Pumps were compared in terms of pump type effects and pump flow effects at high and low flows. Pump-induced mortality estimates were determined for each of the three pump types. Effects of pump head differential and pump speed (rpm) were evaluated using the Midland Midwhirl pump.

Experiments concerning the postsampling holding system involved examination of holding containers and feeding effects. The holding system consisted of an ambient temperature flow-through water bath situated near the sampling station. Survival was determined for larvae held for 96 hours in glass jars or in containers that permitted water flow-through. Survival of larvae fed on a diet of brine shrimp was compared to that of larvae held without feeding.

These experiments were performed from April through June 1976 before the seasonal Hudson River entrainment period began so that modifications in equipment design and experimental procedures could be perfected prior to the sampling season.

A.2 METHODS AND MATERIALS

A.2.1 Basic System Operational Modes and Treatment of Experimental Specimens

Table Description and Operation

The pump/larval table combination was the sampling device tested most extensively. The basic pump used was a Midland Midwhirl pump, an induction-type pump with a recessed impeller, commonly used in fish hatcheries and fruit processing operations. This pump was designed to cause minimal damage to the materials pumped. Two other types of pumps (described later) were also used in these experiments. A flexible hose 10 cm in diameter was used to pump water from the area being sampled to the larval table. The larval table was approximately 5.2 m long, 1.2 m wide, and 0.6 m deep (Figure A.2-1). Water enters the table in an expansion section (wide box-like structure) that receives, spreads, and reduces the flow of water from the pump. At the end of the expansion section, a directional screen (505-μ mesh) diverts organisms, debris, and a small portion of the water under a false bottom and into a collection section containing a recessed filtering collection basket. Beneath the basket, a pipe leads the flow of water from the table to a valve (termed a Q-2 valve), which can be adjusted to control the volume of water flowing through the collection basket. A small plankton net (505-μ mesh) was placed over the end of the pipe to collect any test organisms that might not have been diverted into the collection basket by the inclined screen. Water in the upper portion of the table passes over a discharge weir and into a flow-calibration box to determine rate of flow into the table. Alternatively, rate of flow could be determined by an in-line flowmeter attached to the head of the table.

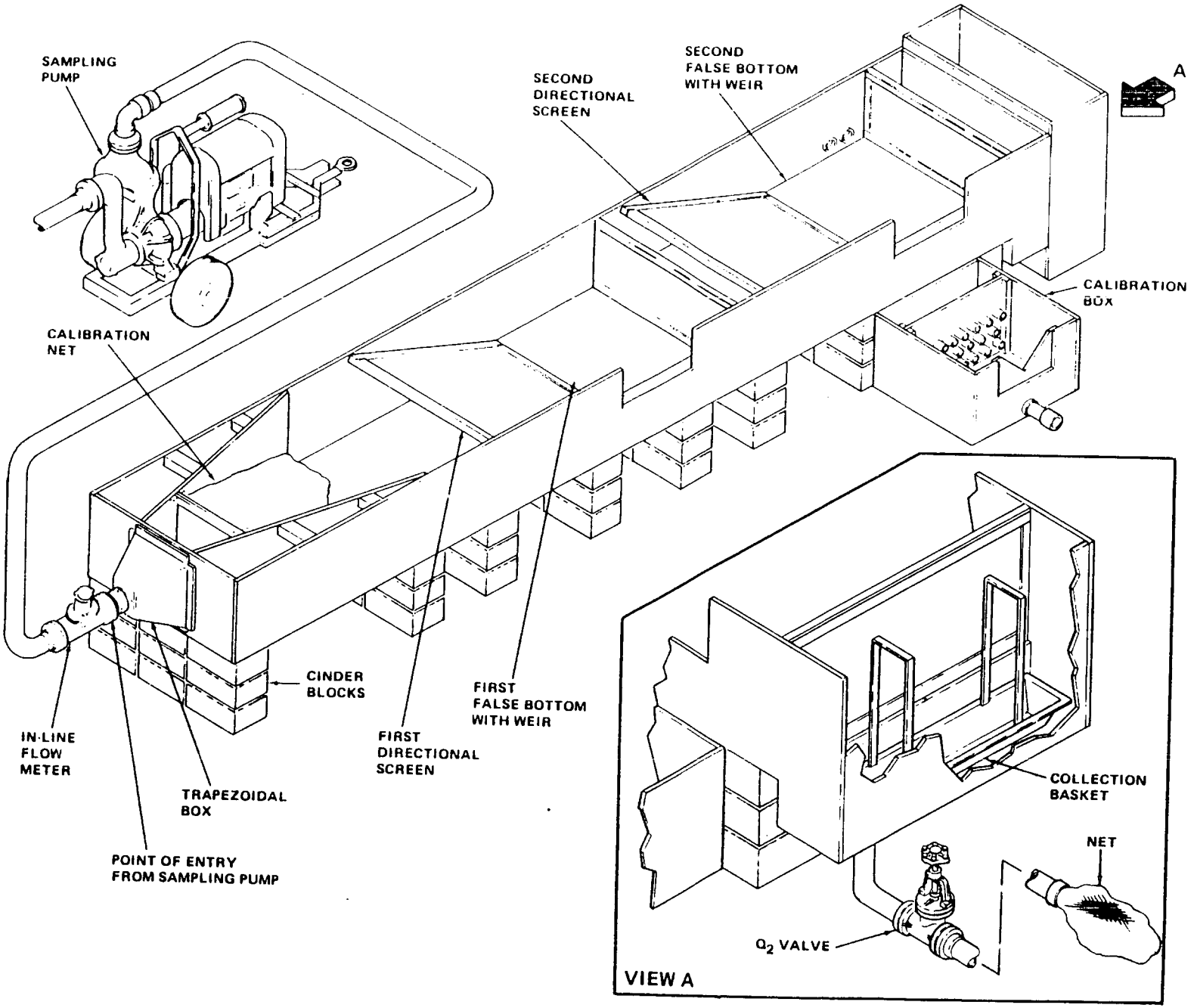


Figure A.2-1. Design of larval collection tables used in the Bowline Point entrainment survival studies during 1975 and in March 1976.

The normal procedure for operating the pump larval table was as follows: Prior to starting the pump, the collection basket was seated in the larval table, the plankton net was placed over the discharge pipe leading from the table, and the valve below the collection basket was closed. A 505-μ mesh net (calibration net) was also placed over the intake to the table to prevent organisms from entering the table before sampling began. The pump was then started and the throttle adjusted to provide the flow rate desired. Water entering the table proceeded to pass through the inclined screen and over the discharge weir into the calibration box, which was used to determine flow rate. In some experiments flow rate was determined using the in-line flowmeter. When a desired flow rate was established, the valve below the collection basket was opened and the calibration net over the intake removed, allowing organisms to enter the table and to be filtered by the collection basket for a specific period of time. Experiments were performed at the plant discharge sampling site. Elevated temperature of the discharge water used for experiments was similar to the acclimation temperature of experimental organisms.

Method of Specimen Introduction into the Experimental System

Approximately 50 larvae were placed into a pipe 10.2 cm in diameter (1.5 m long) that was connected to a 190-liter reservoir. The organisms were sealed in the pipe with a 505-μ mesh net. By closing a valve controlling the main water source and opening a valve leading to the pipe containing the larvae, water from the pipe and reservoir was drawn into the hose leading to the pump. As the water in the 190-liter reservoir was drained, the first valve was reopened and the second valve was closed. This procedure caused the main flow of water to be pulled from the discharge canal of the plant

and allowed the experimental organisms to pass through the pump into the larval table.

After 15 minutes, the pump was shut off and the table was allowed to drain. When nearly drained, the table was washed down and the collection basket was removed. Complete drainage was then allowed and any organisms still present were collected in the small plankton net placed over the end of the Q-2 discharge pipe.

Method of Specimen Handling After Experiencing the System

After samples were collected, larvae were transferred from the collection basket to a styrofoam cooler box, then transported to and placed in an ambient temperature flow-through water bath near the sample station. Here, the specimens were sorted, counted, and removed.

The condition of the larvae was evaluated by the following criteria:

Alive: swimming vigorously; no orientation problems; behavior normal

Stunned: swimming erratically; struggling; swimming on side; some twitching, but mobile

Dead: no vital life signs; no body or opercular movement; no response to gentle probing.

Alive and stunned larvae were gently transferred via a large-bore glass pipette to aerated, ambient temperature containers (described later), in which they were maintained for latent survival observations. Observations of latent survival were made at 3, 12, and 96 hours after collection. At 96

hours, all alive, stunned, and dead larvae were enumerated and preserved in labeled vials for quality control checks.

History of Experimental Specimens

The various experimental sampling techniques were evaluated using larvae of striped bass (Morone saxatilis). Larvae were obtained from the Moncks Corner Fish Hatchery, Moncks Corner, South Carolina, and from the Texas Instruments' Fish Hatchery, Buchanan, New York. Yolk-sac larvae from Moncks Corner were shipped via air to New York, where they were transferred to on-site laboratories at the Central Hudson Gas & Electric Corporation's Roseton Generating Station and at the Orange and Rockland Utilities' Bowline Point Generating Station. Yolk-sac larvae from Texas Instruments were transported a short distance by automobile from Buchanan, New York. At the onsite laboratories, the larvae were maintained in six 190-liter tanks serviced by a continuous flow of discharge water from the generating stations. Beginning five days after hatching, all larvae were fed brine shrimp every six hours.

Basic Experimental Design

Pump/table experiments were designed with two replicates, each composed of two test levels. Each test consisted of a 15-minute exposure of approximately 50 larvae. Control groups of approximately 50 larvae each were included in most tests. Control larvae were handled and held in the same manner as the experimental larvae. Yolk-sac and post-yolk-sac larvae up to 32 days old were tested; however, not all variables were tested using each life stage.

A.2.2 New Experimental Systems and Operational Modes

Experiments were conducted to examine effects of various modifications (by Ecological Analysts) to the original larval table system. Experiments were also conducted to determine the feasibility of using a pump/net system for viability sampling.

Description of Modified Larval Table and Associated Handling Techniques

The larval table was modified in the collection box area (Figure A.2-2). This modification included replacement of the removable stainless steel mesh collection basket with a nonremovable collection box constructed of stainless steel mesh side panels. Larvae collected in the removable basket were exposed to air when the basket was lifted from the collection box. Additional stress on exposed larvae was incurred when specimens were rinsed from the removable basket into a styrofoam transporting container. At the time of collection, larvae in the modified collection box passed through a length of 2.5-cm tygon tubing into a screen-topped transportation container (Figure A.2-2). After collection, the tubing was removed and the transportation container was carried into the laboratory.

Description of Pump/Net System and Associated Handling Techniques

A large nylon net was designed and tested to determine the feasibility of using a 4-in. trash pump/net system for collection of viability samples. A 505-μ mesh net (1 m in diameter and 2.4 m high) was suspended vertically in a fiberglass tank (1.5 m in diameter and 3.0 m high) (Figure A.2-3). Before a sample was taken, the tank was filled with water at the rate of 200 gpm through a valve (valve A, Figure A.2-3) located outside the net. When

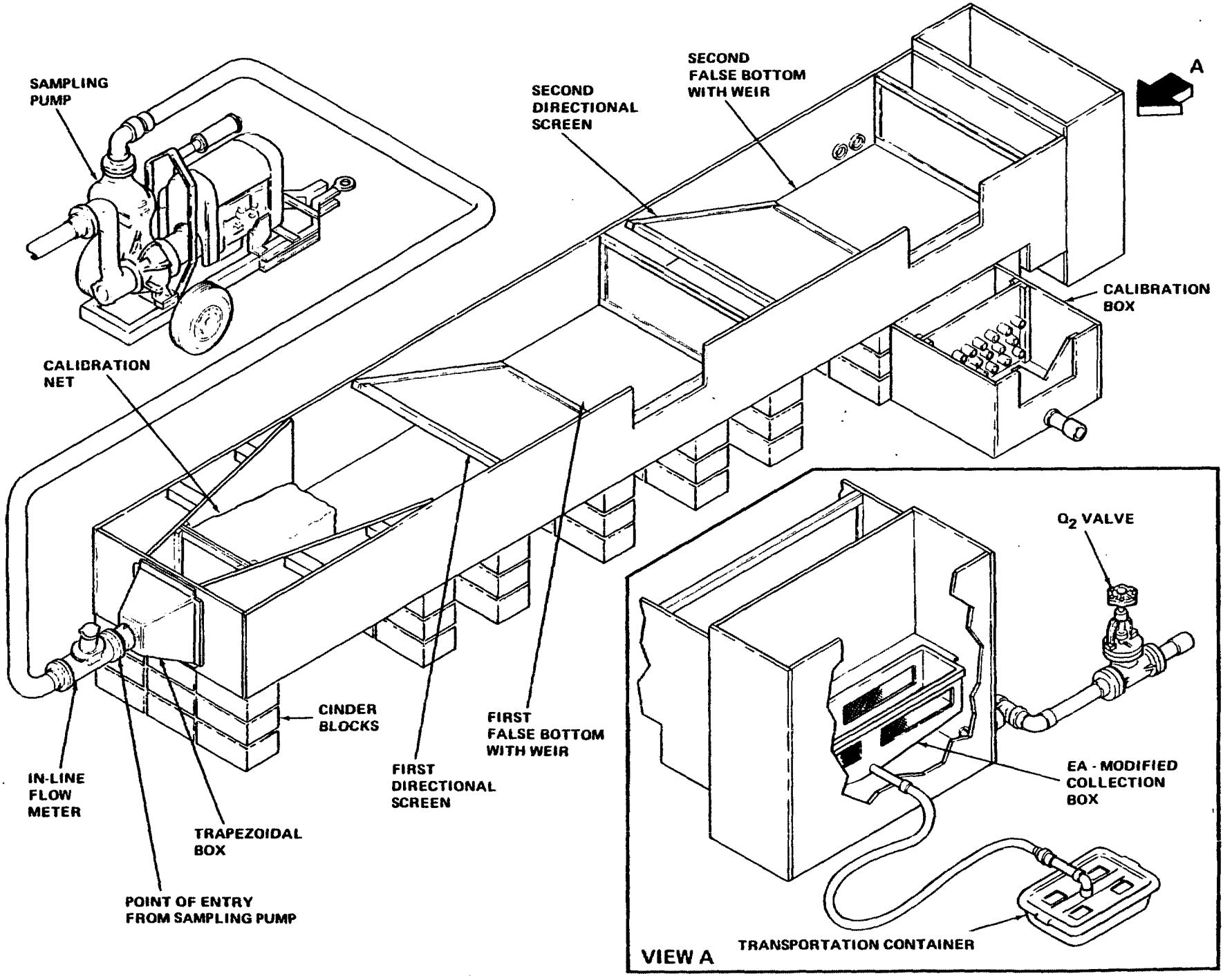


Figure A.2-2. Design of the larval collection tables used in the Bowline Point entrainment survival studies beginning in May 1976.

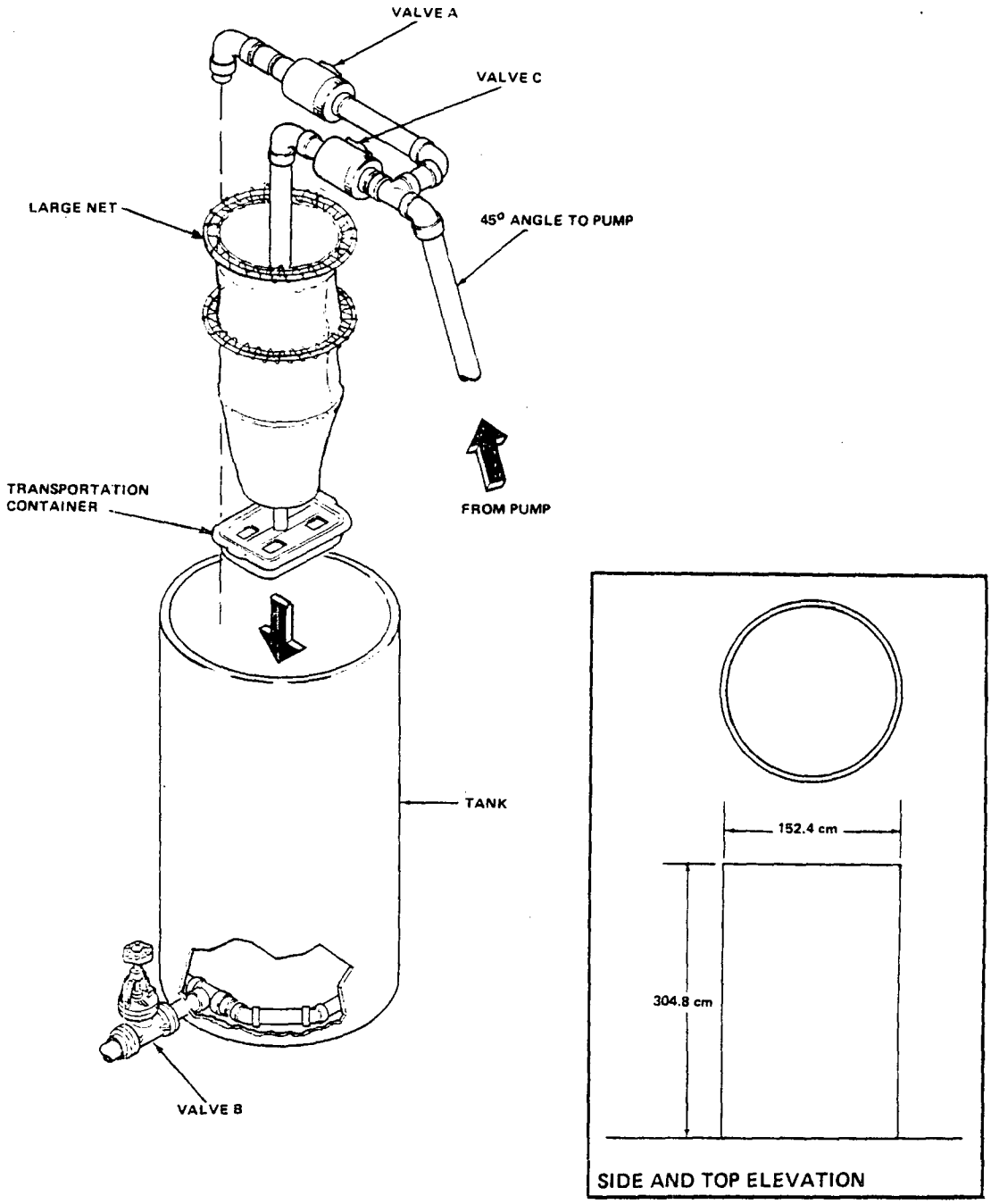


Figure A.2-3. Illustration of pump net entrainment survival sampling apparatus.

the tank was full, a valve in the bottom of the tank (valve B, Figure A.2-3) was opened so that flow through the system was 200 gpm. At this time, water flow was diverted and another valve (valve C, Figure A.2-3) was opened so that water from the pump now passed into the net. At the end of a 15-minute experiment, the pump and valve in the tank bottom were shut off. With the tank still full of water, the net was gently agitated and lifted from the tank. Larvae were concentrated in the transportation container (similar to that used with the modified table design) attached to the bottom of the net. The transportation container was removed from the net and carried to the laboratory facility. Larvae were removed from the container using the method previously described.

Pumps

Three types of pumps were used in the experimental studies. Most experiments involved the Midland Midwhirl pump previously described. Several experiments were conducted using Homelite 3-in. and 4-in. trash pumps. When compared with the Midwhirl pump, trash pumps have the advantage of being smaller, more easily transported, and less expensive. The nonrecessed impeller characteristic of the trash pumps may be a possible disadvantage when considering pump effects on larval survival.

A.2.3 Experimental Designs

Experiments Concerning Receiving Systems

Effects of the receiving system on larval survival were examined by placing larvae directly into the larval table or net. Since the pumping system was bypassed, any effects on larval survival were attributed to variables within the receiving system. Several experiments in this series were conducted by

placing larvae in the original table, the modified table, and the net under the same flow rate conditions (approximately 200 gpm). Larval survival in the three receiving systems was calculated and statistically compared to determine which system yielded the best survival. In addition, larvae that were not collected in the collection box or transportation container were rinsed from the system and counted. These counts were compared for the various systems.

Experiments were conducted with the original table design to determine effects of rate of flow through the collection box (Q-2 flow) on larval survival. The Q-2 flow variable is important in view of potential larval impingement on collection box screens. These experiments involved tests at high Q-2 flow (144 gpm) and low Q-2 flow (30 gpm). Data from the two test levels were compared to determine significance of Q-2 flow rate.

Another test series was designed to examine effects of flow rate through the original larval table. In order to maximize the volume of water sampled (and consequent sample size) it is desirable to maximize table flow rate. Larval survival, however, may be reduced by mechanical effects (buffeting, abrasion, and impingement on table screens) resulting from excessive table water flow. The objective of the table flow experiments was to determine a maximal flow rate that would not significantly affect larval survival. These experiments were designed to allow examination of survival at low table flow (approximately 150 gpm) and high table flow (approximately 225 gpm).

Experiments Concerning the Pumping System

Larval fish in this series of tests experienced both the pump and larval table components of the experimental system.

Several experiments were conducted using the Midwhirl, 4-in., and 3-in. trash pump/table systems. Table operation was kept constant during these experiments to test the independent effect of each pump on larval survival.

Pump mortality estimates were calculated based on survival of larvae exposed to the pump and table in combination and to the table alone. Probability of surviving the pump was calculated as follows:

$$P\{p\} = \frac{P\{pt\}}{P\{t\}}$$

where:

P{p} = probability of surviving the pump

P{pt} = probability of surviving pump/table system

P{t} = probability of surviving the table.

Other pump-related variables including rate of flow through pumps, pump head differential, and pump rpm were examined for the Midwhirl pump. Pump flow experiments were conducted at high flow (225 gpm) and low flow (150 gpm). The pump head differentials were varied by changing the water height in the discharge seal well at the Roseton plant. Larval survival was examined at low pump suction head (approximately 4 ft) and at high head (14 ft). Pump rpm effect was examined by maintaining constant flow and varying the rpm. Tests were conducted at 3 rpm levels at low flow (144 gpm) and high flow (200 gpm). Another experiment was conducted to determine effects of varying flow while rpm was kept constant. All rpm experiments necessitated water flow regulation by the pump hose intake valve.

Experiments Concerning the Handling and Holding Systems

Two different holding methods were used to maintain the larvae for latent effects observations. Larvae were held in 0.9-liter glass jars supplied with air, or in 0.9-liter plastic freezer containers. The plastic freezer containers were modified to permit water flow-through by removing a portion of three sides and placing 505-μ mesh nylon screen over the openings. The experiment involved placement of 25 larvae in each container type and determination of their survival 96 hours later.

Feeding experiments were conducted to determine whether fed larvae survived better than unfed larvae. Approximately 25 larvae were placed in each container type (jar and flow-through container). Within each container type, one group was fed brine shrimp every 6 hours and another group was not fed. Survival was recorded 96 hours after the experiment began and data were compared to determine feeding effects.

Statistical Analyses

Statistical analyses of the data used for comparison of various tests are based on testing the differences between proportions or counts (Freund 1967). Significance was defined at a probability level of 0.05 or less. Results of replicates were combined for use in comparison tests. Tests of significance for the various factors studied considered initial (immediate) survival and survival after 96 hours of latent effects observations.

REFERENCES: SECTION A.2

Freund, J. E. 1967. Modern Elementary Statistics. Prentice-Hall, Inc. Englewood Cliffs, New Jersey. 432 pp.

A.3 RESULTS AND DISCUSSION

A.3.1 Survival of Striped Bass Larvae Exposed to Table and Net Receiving Systems

Initial and 96-hour survival estimates of striped bass larvae indicated greater survival for specimens placed in the original and modified larval tables than for those placed in the net (Table A.3-1). Initial survival in the modified larval table (100 percent) was significantly greater ($Z = 10.7$) than the 42 percent estimate for the net. Survival at 96 hours was also significantly greater ($Z = 13.3$) in the modified table (21 percent) than in the net (0 percent).

Numbers of larvae remaining in the receiving system were greater for the net system than for the original table or modified table (24, 6, and 5 percent, respectively). These larvae were obtained by washing down the tables or net and collecting the dead specimens in their respective collection containers.

Larval survival in the original table for various operational modes ranged from 89 to 100 percent initial survival and from 14 to 74 percent, 96 hours later (Table A.3-1). Effects of rate of water flow through the original larval table and flow through the collection box were determined to identify sources of potential mortality.

A.3.2 Effects of Flow Rate Through the Collection Box (Q-2 Flow)

Results of Q-2 flow rate experiments conducted with the original table showed no significant differences in survival between low (30 gpm) and high (144 gpm) flow rates (Table A.3-1). Initial survival of 20-to-31-day-old larvae ranged from 95 to 100 percent at low Q-2 flow and 98 to 99 percent at

TABLE A.3-1 PERCENT SURVIVAL OF LARVAE EXPOSED TO TABLE AND NET RECEIVING SYSTEMS

Experiment Number	Variable	Larval Age (days)(a)	No. in Sample	Percent Survival Initial	Percent Survival 96 hours
1 and 2 (sum)	Net	TI 28-29	83	42(b)	0(c)
3	Modified Table	TI 32	47	100(b)	21(c)
	Original Table				
4	Low Q-2	M 20	76	95	74(d)
5	Low Q-2	M 27-31	105	100	69
4	High Q-2	M 20	85	98	62(e)
5	High Q-2	M 27-31	170	99	64
6	Low flow	M 24	104	89	14
6	High flow	M 24	91	96	17

(a) TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York; M indicates larval source was Moncks Corner Hatchery, South Carolina.
(b) $Z = 10.7$, critical value ($\alpha = 0.05$) = 1.96.
(c) $Z = 13.3$, critical value ($\alpha = 0.05$) = 1.96.
(d) $n = 37$.
(e) $n = 49$.

the high Q-2 flow. Survival at 96 hours indicated that the lower Q-2 rate yielded slightly higher survival (69 to 74 percent) than the higher Q-2 rate (62 to 64 percent) (Table A.3-1).

A.3.3 Effects of Flow Rate Through the Original Table

No significant difference between high and low water flow rates through the original table were detected for either initial or 96-hour survival of 24-day-old larvae (Table A.3-1). Initial survival at the low flow (150 gpm) and high flow (225 gpm) was 89 and 96 percent, respectively. Survival at 96 hours was 14 percent for low flow and 17 percent for high water flow through the table.

These experiments indicate that larval fish exposed to the unique effects of the table receiving system show table-induced mortality rates ranging from 0 to 11 percent. Previous studies conducted by Ecological Analysts under similar operational modes show table-induced mortalities ranging from 10 to 30 percent (Ecological Analysts 1976a). Additionally, Ecological Analysts studies in 1975 showed approximately 50 percent of the larvae were not collected in the basket of the original table after the sample was taken (Ecological Analysts 1976b). This was notably higher than the 5 percent determined for the modified table used in these studies.

Based on the low numbers of uncollected larvae remaining in the table and improvements in handling techniques associated with the redesigned collection box, the modified larval table design is recommended over the original table and the net designed by Ecological Analysts.

A.3.4 Survival of Striped Bass Larvae Exposed to Three Pumping Systems

Data from experiments conducted to determine the effect of pump type on larval survival indicate that the 4-in. Homelite trash pump yielded greater initial survival (76 to 88 percent) than the Midland Midwhirl pump (73 to 77 percent) or the 3-in. Homelite trash pump (37 to 71 percent) (Table A.3-2). Chi-square tests for differences using initial and 96-hour survival data indicate significant differences between the three pump types. Highest survival rate at 96 hours (42 percent) was recorded from experiments conducted with the 4-in. trash pump; however, sample sizes used for the determination were small since only a portion of the organisms were held for latent effects observations. All experiments concerning pump-type effects were conducted using 16-to-19-day-old larvae exposed to a high pump suction head (14 ft) and either high (225 gpm) or low (150 gpm) pump flow rates. Different results may occur if larval age or pumping regimes differ from those used in these experiments.

A.3.5 Pump-Induced Mortality Estimates for Striped Bass Larvae Exposed to Three Pumping Systems

Pump-induced initial mortality estimates ranged from 6 to 19 percent for the 4-in. trash pump, 18 to 22 percent for the Midwhirl pump, and 24 to 61 percent for the 3-in. trash pump (Table A.3-3). Calculation of these estimates was based on the assumption that probability of initially surviving the table (P{t}) was 94 percent. The value P{t} was obtained by combining the data for high and low flow rates through the original table (Table A.3-1). Pump-induced mortality rates calculated for 96-hour survival were inconclusive. In some cases, mortality attributed to the unique effects of the table after 96 hours was greater than mortality attributed to the pump

TABLE A.3-2 PERCENT SURVIVAL OF LARVAE EXPOSED TO THREE PUMP TYPES

Experiment Number	Variables[a]	Percent Survival					
		Midwhirl Pump		4-in. Trash Pump		3-in. Trash Pump	
		Initial	96 hours	Initial	96 hours	Initial	96 hours
7b,14,15	High flow, high head (16- to 19-day-old larvae)	73(b) (n = 114)	2(d) (n = 46)	76(b,f) (n = 106)	10(d,h) (n = 37)	37(b,g) (n = 115)	12(d) (n = 24)
7b,14,15	Low flow, high head (16- to 19 day-old larvae)	77(c) (n = 166)	8(e) (n = 73)	88(c,f) (n = 93)	42(e,h) (n = 21)	71(c,g) (n = 123)	17(e) (n = 38)

(a) Larval source was Moncks Corner Hatchery, South Carolina.
(b) Indicates initial survival estimates used in χ^2 test comparison for Midwhirl, 4-in., and 3-in. trash pumps; $\chi^2 = 43.27$, critical value ($\alpha = 0.05$) = 5.99.
(c) Indicates initial survival estimates used in χ^2 test comparison for Midwhirl, 4-in., and 3-in. trash pumps; $\chi^2 = 9.04$, critical value ($\alpha = 0.05$) = 5.99.
(d) Indicates 96-hour survival estimates used in χ^2 comparison for Midwhirl, 4-in., and 3-in. trash pumps; $\chi^2 = 16.17$, critical value ($\alpha = 0.05$) = 5.99.
(e) Indicates 96-hour survival estimates used in χ^2 comparison for Midwhirl, 4-in., and 3-in. trash pumps; $\chi^2 = 15.38$, critical value ($\alpha = 0.05$) = 5.99.
(f) Indicates survival estimates used in Z test comparison for high and low flow using 4-in. trash pump; $Z = 2.25$, critical value ($\alpha = 0.05$) = 1.96.
(g) Indicates survival estimates used in Z test comparison for high and low flow using 3-in. trash pump; $Z = 5.59$, critical value ($\alpha = 0.05$) = 1.96.
(h) $Z = 2.70$.

TABLE A.3-3 PERCENT MORTALITY OF LARVAE EXPOSED TO THREE PUMP TYPES

Experiment Number	Variables[a]	Percent Mortality					
		Midwhirl Pump		4-in. Trash Pump		3-in. Trash Pump	
		Initial	96 hours	Initial	96 hours	Initial	96 hours
6,7b,14,15	High flow, high head (16- to 24-day-old larvae)	22	87	19	36	61	20
6,7b,14,15	Low flow, high head (16- to 24-day-old larvae)	18	47	6	--[b]	24	--
16,17,5	Low head, variable Q-2 (26- to 32-day-old larvae)	6	46	--	--	--	--
18,19,4	Low head, variable Q-2 (18- to 20-day-old larvae)	9	15	--	--	--	--

(a) Larval source was Moncks Corner Hatchery, South Carolina.
(b) Dashes indicate no data available.

and table after 96 hours. Thus, it is impossible to estimate a latent effect, if any, due to the pump with these data.

Additional pump mortality estimates were calculated from experiments involving larvae exposed to the Midland Midwhirl pump and larval table Q-2 flow tests (Table A.3-3). The data show that initial mortality attributed to the Midwhirl pump was 6 percent for 26-to-32-day-old larvae and 9 percent for 18-to-20-day-old larvae. Mortality at 96 hours was 46 percent for the older larvae and 15 percent for the younger larvae. Calculation of the Midwhirl pump effect on survival was based on the assumption that probability of surviving the table (P{t}) for 26-to-32-day-old larvae was 100 percent initially and 65 percent at 96 hours. The initial and 96-hour P{t} values were obtained by combining the data for high and low Q-2 flow rates through the original table (Table A.3-1). Probability of surviving the table (P{t}) for 17-to-20-day-old larvae was 96 percent initially and 67 percent at 96 hours.

A.3.6 Survival of Striped Bass Larvae Exposed to Two Flow Rates Through the Pump Using Three Pumping Systems

Survival at low (150 gpm) and high (225 gpm) flow rates through the Midwhirl, 4-in., and 3-in. trash pumps was determined. These values for initial survival were 88 percent (low flow) and 76 percent (high flow) for the 4-in. trash pump; 77 and 73 percent for the Midwhirl; and 71 and 37 percent for the 3-in. trash pump (Table A.3-2). Tests for initial survival differences between the two flows indicated significant differences for the 4-in. and 3-in. trash pumps ($Z = 2.25$ and $Z = 5.59$, respectively). Initial survival rates for the Midwhirl pump were not significantly different for 16-to-19-day-old larvae (Table A.3-2).

Survival at 96 hours for low and high pump flow rates was 8 and 2 percent for the Midwhirl, 42 and 10 percent for the 4-in. trash pump, and 17 and 12 percent for the 3-in. trash pump (Table A.3-2). Significant differences (Z = 2.70) between survival at the two flow rates were noted only for the 4-in. trash pump; however, it should be noted that sample sizes were small.

Results of experiments indicate that the Midland Midwhirl and the 4-in. trash pumps are the most desirable systems to use for combination pump and larval table entrainment sampling. This conclusion is based on the relatively high initial survival recorded for both pump types and the high 96-hour survival noted for the 4-in. trash pump. The Midland pump yielded relatively low survival at 96 hours; however, analysis of control larvae survival subjected only to holding for 96 hours (Table A.3-4) indicates that survival of controls compares favorably with that recorded for the Midwhirl pump.

A.3.7 Effects of Pump Head and rpm on Larval Survival Using the Midland Midwhirl Pump System

Further studies of the effect of pump suction head and rpm on survival were conducted using the Midland Midwhirl pump.

Initial survival data showed that 19-to-23-day-old larvae exposed to a low pump suction head (approximately 4 ft) experienced less mortality than larvae exposed to a high pump suction head (approximately 14 ft). Tests for head effects utilizing initial survival rates at low head (86 percent) and high head (75 percent) indicated that the difference was statistically significant (Z = 3.43) (Table A.3-5). There was, however, no detectable difference between survival for the same age larvae held for 96 hours. Pump head tests with 11-to-13-day-old larvae showed that survival differences

TABLE A.3-4 PERCENT SURVIVAL OF LARVAE EXPOSED TO VARIOUS FEEDING AND HOLDING CONTAINER CONDITIONS

Experiment Number	Feeding Condition[a]	Percent Survival at 96 Hours	
		Glass Jar	Flow-Through Container
23	Fed (M 11- to 17-day-old larvae)	75[b] (n = 171)	17[b] (n = 139)
23	Unfed (M 11- to 17-day-old larvae)	70[c] (n = 148)	10[c] (n = 132)
18c, 19c, 4c	Unfed (M 18- to 20-day-old larvae)	68[d] (n = 162)	21[d] (n = 159)
6c, 16c, 5c	Unfed Controls from other experiments (M 24- to 32-day-old larvae)	31 (n = 325)	--[e]
25c, 26c, 27c, 28c, 2c, 29c	Unfed Controls from other experiments (TI 21- to 32-day-old larvae)	10 (n = 245)	--

(a) M indicates larval source was Moncks Corner Hatchery, South Carolina; TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York.
(b) Indicates survival estimates used in Z test comparison, Z = 9.6, critical value ($\alpha = 0.05$) = 1.96
(c) Indicates survival estimates used in Z test comparison, Z = 12.6
(d) Indicates survival estimates used in Z test comparison, Z = 13.9
(e) Dashes indicate no data available.

TABLE A.3-5 PERCENT SURVIVAL OF LARVAE EXPOSED TO VARIABLE HEAD, RPM, AND FLOW FOR THE MIDWHIRL PUMP

Experiment Number	Variable	Larval Age (days)(a)	No. in Sample	Percent Survival Initial	Percent Survival 96 hours
	Head				
8,9	Low head (sum	M 12-13	444	47	
13	flows)	M 20-23	338	86(b)	12(n = 196)
7a	High head (sum	M 11	398	52	
7b	flows)	M 19	280	75(b)	6(n = 119)
	Variable rpm				
	Low flow				
20	670 rpm	M 24	109	99(c)	67(d)
	870 rpm	M 24	106	93(c)	52(d)
	1,070 rpm	M 24	100	77(c)	43(d)
	High flow				
21	685 rpm	TI 9	125	76(e)	14(f)
	885 rpm	TI 9	139	75(e)	4(f)
	1,090 rpm	TI 9	204	36(e)	0(f)
	Variable flow (constant rpm)				
	129 gpm	TI 7	117	63	1(g)
	198 gpm	TI 7	35	69	20(g)
	277 gpm	TI 7	70	63	4(g)

(a) M indicates larval source was Moncks Corner Hatchery, South Carolina; TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York.

(b) Indicates survival estimates used in Z test comparison; Z = 3.43, critical value ($\alpha = 0.05$) = 1.96

(c) Indicates estimates used in χ^2 test comparison; $\chi^2 = 29.9$, critical value ($\alpha = 0.05$) = 5.99

(d) Indicates estimates used in χ^2 test comparison; $\chi^2 = 12.3$, critical value ($\alpha = 0.05$) = 5.99.

(e) Indicates estimates used in χ^2 test comparison; $\chi^2 = 72.3$, critical value ($\alpha = 0.05$) = 5.99.

(f) Indicates estimates used in χ^2 test comparison; $\chi^2 = 18.3$, critical value ($\alpha = 0.05$) = 5.99.

(g) Indicates estimates used in χ^2 test comparison; $\chi^2 = 17.9$, critical value ($\alpha = 0.05$) = 5.99.

between low and high heads were statistically nonsignificant. All survival estimates at both head levels were calculated by combining the data for the high and low water flow tests completed concurrently with the head tests.

Experiments were conducted to determine pump rpm effects when pump flows were held constant. Data from tests completed at low flow (144 gpm) indicate a significant decrease in both initial (from 99 to 77 percent) and 96-hour (67 to 43 percent) survival as the rpm increases. Other rpm tests conducted at high pump flows (approximately 200 gpm) showed the same trend. Overall survival at the high flow test was lower than that for low flow; however, difference in larval age between the two test groups may be related to this observation (Table A.3-5). Experiments with increasing pump flows at constant rpm (920 to 940) showed no differences in initial survival. The data from these Midwhirl pump experiments indicate that within the range of values tested, changes in rpm, not flow alone, affect larval survival.

A.3.8 Survival of Striped Bass Larvae Exposed to Various Holding Techniques Used in Latent Survival Determinations

Effects of Holding Container Type on Survival

Data from experiments conducted to determine holding container effect showed significantly greater survival (68 to 75 percent) for specimens held in glass jars than for those held in flow-through containers (10 to 21 percent) (Table A.3-4). Control larvae held in glass jars and monitored concurrently with other larvae exposed to various experimental regimes yielded 96-hour survival from 10 to 31 percent. However, these data were characteristic of control larvae at one site only and probably reflect site-specific holding idiosyncrasies.

Effects of Feeding on Survival

Survival at 96 hours of 11-to-17-day-old larvae fed brine shrimp every six hours was not significantly different from survival of unfed larvae held in both glass jars and flow-through containers (Table A.3-4). Subsequent examination of alimentary tracts from the fed larvae indicated that 73 percent had empty stomachs and, therefore, were not feeding. In view of this fact, these experiments were inconclusive for determination of feeding effects on larval survival.

REFERENCES: SECTION A.3

Ecological Analysts, Inc. 1976a. Bowline Point Generating Station Entrainment Survival and Abundance Studies. Vol. I. 1975 Annual Interpretive Report. Appendix B: Evaluation of the larval table/ Midland Midwhirl pump as a collection device for entrainment survival studies. July.

Ecological Analysts, Inc. 1976b. Preliminary data summary report for the 1975 studies at the Roseton and Danskammer Point generating stations. January.

A.4 DESCRIPTION OF INDIVIDUAL EXPERIMENTS

Experiment Number	Description of Experiment
1	Net Experiment with No Pump Effect One test was completed utilizing 28-day-old Texas Instruments' (TI) larvae. Specimens were placed directly into the net and exposed to 200 gpm flow rate for 15 minutes.
2	Net Experiment with No Pump Effect The test was similar to Experiment 1, except that 29-day-old larvae were used.
2c	Controls for Experiment 2 These 29-day-old controls were monitored concurrently with experimentals. Control fish were placed in glass jars in the latent effects holding facility and survival was recorded over the 96-hour observation period.
3	Modified Table Experiment with No Pump Effect This experiment involved larvae exposed to the modified larval table. Larvae were introduced directly into the table at the pump hose-table connection point. One test was conducted in this experiment with 32-day-old TI larvae. Rate of flow through the table was 200 gpm with 0 gpm flow rate through the collection box (Q-2 flow).

Experiment Number	Description of Experiment
4	Q-2 Experiment with Original Table and No Pump Effect

This series of tests was designed to examine the effects on survival of rate of water flow (designated the Q-2 flow) through the larval table collection box. Larvae were exposed to the table with a flow rate of 144 gpm. Rate of flow through the collection box was regulated by adjusting the table draining valve (the Q-2 valve) attached to the bottom of the collection box. Experiment 4 involved examination of larval survival when the Q-2 valve discharged all water in the system (high Q-2 flow) and when the Q-2 valve was closed to the point where only 32 gpm flowed through the collection box (low Q-2 flow). At low Q-2 flow, all water passing through the pump/table system was not discharged through the Q-2 valve and consequently was discharged through the weir opening in the side of the larval table.

When the flow rate through the pump/table system was 144 gpm, the high Q-2 discharge rate was 144 gpm and the low Q-2 rate was 32 gpm (with 112 gpm passing over the weir).

Two test replicates at low and high Q-2 flows were conducted with 20-day-old Moncks Corner larvae. One-half of the initially surviving larvae were placed in glass jars and one-half in flow-through containers for latent effects observations.

Experiment Number	Description of Experiment
4c	Controls for Experiment 4 Four control replicates were utilized.
5	Q-2 Experiment with Original Table and No Pump Effect Larvae were placed in the table with a flow rate of 223 gpm. At this table flow rate, the high Q-2 discharge rate was 144 gpm (79 gpm passing over the weir) and the low rate was 30 gpm (193 gpm passing over the weir). Two replicates were conducted at low Q-2 and three at the high Q-2 rate using 27-to 31-day-old Moncks Corner larvae.
5c	Controls for Experiment 5 Five control replicates were included with this series.
6	Flow Experiment with No Pump Effect Larvae were placed in the table and exposed to either low flow (144 gpm) or high flow (225 gpm) rates through the table. Two replicates were completed at each flow rate using 24-day-old Moncks Corner larvae.
6c	Controls for Experiment 6 Four control replicates were included with these tests.

Experiment Number	Description of Experiment
7a	Flow Experiment at High Head with Midwhirl Pump/Larval Table System This experiment was conducted to examine effects on larval survival of rate of water flow through the Midwhirl pump and larval table. Specimens were exposed to the pump and table. High pump head conditions existed during these tests which were conducted at low flow (144 gpm) and high flow (225 gpm). Two replicates were completed at each flow level using 11-day-old Moncks corner larvae. One-half of the initially surviving larvae were placed in glass jars and one-half in flow-through containers for latent effects observation.
7b	Flow Experiment at High Head with Midwhirl Pump/Larval Table System Experiment 7b was conducted under conditions similar to those stated for Experiment 7a with the exception that larvae were 19 days old.
8	Flow Experiment at Low Head with Midwhirl Pump/Larval Table System

Experiment Number	Description of Experiment
	One replicate was completed that included one test at low flow (144 gpm) and one at high flow (225 gpm). This experiment was conducted under low head conditions using 12-day-old Moncks Corner larvae.
9	Flow Experiment at Low Head with Midwhirl Pump/Larval Table System This test series included two replicates conducted under the same conditions as Experiment 8. Larvae used were 12 to 13 days old.
10-12	No latent effects information was available for these tests; therefore, data were not included in this report.
13	Flow Experiment at Low Head with Midwhirl Pump/Larval Table System This series included two replicates at both flow levels in addition to a partial replicate completed at low flow. The experiment was conducted under low head conditions using 20-to-23-day-old Moncks Corner larvae.
14	Flow Experiment at High Head with 4-in. Trash Pump/Larval Table System This sequence involved flow experiments at high head using the Homelite 4-in. trash pump/larval table

Experiment Number	Description of Experiment
	combination. Two replicates were completed and each included one test at low flow (155 gpm) and one at high flow (246 gpm). One-half the initially surviving 16-to-17-day-old Moncks Corner larvae were placed in glass jars and one-half in flow-through containers for latent effects observations.
15	Flow Experiment at High Head with 3-in. Trash Pump/Larval Table System This flow experiment series was conducted with the Homelite 3-in. trash pump/larval table combination under high head conditions. Two replicates were completed, each including one test at low flow (144 gpm) and one at high flow (223 gpm). One-half the initially surviving 18-day-old Moncks Corner larvae were placed in glass jars and one-half in flow-through containers for latent effects observations.
16	Q-2 Experiment at Low Head with Midwhirl Pump/Larval Table System The experiment was conducted under conditions similar to those described in Experiment 5, except that the larvae were also exposed to the pump. Two replicates were completed, each with one test at both Q-2 flow levels. Larvae were 26-days old.

Experiment Number	Description of Experiment
16c	Controls for Experiment 16 Four control replicates were included with these tests.
17	Q-2 Experiment at Low Head with Midwhirl Pump/Larval Table System Experiment 17 was similar in all respects to Experiment 16 with the exception that larvae were 32 days old.
18	Q-2 Experiment at Low Head with Midwhirl Pump/Larval Table System This series was similar to Experiment 4 with the exception that larvae were also exposed to the pump. Three replicates were completed, each with one test at both Q-2 flow levels. Larvae were 17 to 18 days old.
18c	Controls for Experiment 18 Two control replicates were used.
19	Q-2 Experiment at Low Head with Midwhirl Pump/Larval Table System The test conditions for this series were similar to Experiment 18. Two replicates were conducted at high and low Q-2 rates utilizing 19-day-old larvae.

Experiment Number	Description of Experiment
20	An rpm Experiment at Constant Low Flow with Midwhirl Pump/Larval Table System This series was conducted to examine effects of change in pump rpm at a constant low water flow rate through the pump/table system. The rpm was varied by changing pump engine speed. Constant low water flow was maintained at 144 gpm by adjusting a valve on the pump intake hose. One replicate was completed with tests at 670, 870, and 1,070 rpm using 24-day-old Moncks Corner larvae.
21	An rpm Experiment at Constant High Flow with Midwhirl Pump/Larval Table System This experiment was similar to Experiment 20 except that a constant high water flow (approximately 200 gpm) was maintained. One replicate was completed with tests at 685, 885, and 1,090 rpm using 9-day-old TI larvae.
22	Flow Experiment at Constant rpm with Midwhirl Pump/Larval Table System The experiment involved three flow rates (129, 198, and 277 gpm) maintained by adjusting a valve on the pump intake hose. Engine speed was kept constant between 920 and 940 rpm. One replicate was completed with tests at the three flow rates using 7-day-old TI larvae.

Experiment Number	Description of Experiment
23	Feeding and Holding Container Experiment This series was performed to determine effects of feeding and holding container type on larval survival. Specimens were either not fed or fed brine shrimp at six-hour intervals. Both feeding conditions were represented in glass jar and flow-through container types. Specimens were held in the latent effects holding system and survival at 96 hours was recorded. Three replicates were completed. A replicate included two tests for each feeding and container condition. Moncks Corner 11-to-17-day-old larvae were used in the experiments.
25c-29c	Controls (used with experiments not included in this report). Texas Instruments' larvae 21 to 32 days old were held in glass jars and not fed.

APPENDIX B

RAW DATA FROM INDIVIDUAL EXPERIMENTS WITH STRIPED BASS LARVAE

TABLE B-1 RAW DATA FOR STRIPED BASS LARVAE EXPOSED TO TABLE AND NET RECEIVING SYSTEMS

Experiment Number	Variables	Larval Source and Age (days)[a]	Observation: Initial Number Recovered	Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
1	Net (Ecological Analysts)	TI 28	46	13	28	no data		2	4	0	0
2	Net (Ecological Analysts)	TI 29	37	22	60	13	35	12	32	0	0
3	Modified table	TI 32	47	47	100	46	98	46	98	10	21
4	Original table										
	Low Q-2	M 20	76	72	95	37[b]	95	29[b]	74	29[b]	74[c]
	High Q-2	M 20	85	83	98	49[b]	98	48[b]	96	31[b]	62[d]
5	Low Q-2	M 27 to 31	105	105	100	87	83	87	83	72	69
	High Q-2	M 27 to 31	170	169	99	161	95	159	94	108	64
6	Low flow	M 24	104	92	89	70	67	61	59	15	14
	High flow	M 24	91	87	96	70	77	68	75	15	17

(a) TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York; M indicates larval source was Moncks Corner Hatchery, South Carolina.
(b) Indicates data used from specimens held in glass jars. Proportion surviving in glass jars times initial proportion surviving equals survival at latent observation interval.
(c) n = 37.
(d) n = 49.

TABLE B-2 RAW DATA FOR STRIPED BASS LARVAE EXPOSED TO THREE PUMP TYPES

Experiment Number	Variables	Larval Source and Age(days)[a]	Observation: Initial Number Recovered	Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
7b	Midwhirl pump										
	High head										
	Low flow	M 19	166	128	77	33[b]	35	31[b]	34	8[b]	8[c]
	High flow	M 19	114	83	73	29[b]	46	27[b]	43	1[b]	2[d]
14	4-in. trash pump										
	High head										
	Low flow	M 16 to 19	93	82	88	20[b]	84	20[b]	84	10[b]	42[e]
	High flow	M 16 to 19	106	81	76	36[b]	74	35[b]	72	5[b]	10[f]
15	3-in. trash pump										
	High head										
	Low flow	M 18	123	87	71	35[b]	65	33[b]	62	9[b]	17[g]
	High flow	M 18	115	43	37	18[b]	28	18[b]	28	8[b]	12[h]

(a) M indicates larval source was Moncks Corner Hatchery, South Carolina.
(b) Indicates data used from specimens held in glass jars. Proportion surviving in glass jar times initial proportion surviving equals survival at latent observation interval.
(c) n = 73.
(d) n = 46.
(e) n = 21.
(f) n = 37.
(g) n = 38.
(h) n = 24.

TABLE B-3 RAW DATA USED FOR STRIPED BASS PUMP MORTALITY CALCULATIONS(a)

Experiment Number	Variables	Larval Source and Age(days)(b)	Observation: Initial Number Recovered	Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
	Midwhirl pump										
	Low head										
16	Low Q-2	M 26	108	94	87	76	70	72	67	17	16
	High Q-2	M 26	99	94	95	88	89	85	86	14	14
17	Low Q-2	M 32	101	100	99	90	89	80	79	59	58
	High Q-2	M 32	94	91	97	78	83	72	77	52	55
18	Low Q-2	M 17 to 18	163	140	86	67(c)	86	66(c)	85	47(c)	60(d)
	High Q-2	M 17 to 18	142	114	80	44(c)	80	44(c)	80	30(c)	55(e)
19	Low Q-2	M 19	95	91	96	41(c)	94	37(c)	76	23(c)	53(f)
	High Q-2	M 19	72	64	89	22(c)	89	22(c)	89	16(c)	65(g)

(a) Data from experiments 4 through 7b, 14, and 15 were also used in the calculation.
(b) M indicates larval source was Moncks Corner Hatchery, South Carolina.
(c) Indicates data used from specimens held in glass jars. Proportion surviving in glass jar times initial proportion surviving equals survival at latent observation interval.
(d) n = 67.
(e) n = 44.
(f) n = 42.
(g) n = 22.

TABLE B-4 RAW DATA FOR STRIPED BASS LARVAE EXPOSED TO VARIABLE HEAD, RPM, AND FLOW FOR THE MIDWHIRL PUMP[a]

Experiment Number	Variables	Larval Source and Age (days)[b]	Observation: Initial Number Recovered	Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
	High head										
7a	Low flow	M 11	103	18	17	--[c]	--	--	--	--	--
	High flow	M 11	295	189	64	--	--	--	--	--	--
	Low head										
8	Low flow	M 12	38	5	13	--	--	--	--	--	--
	High flow	M 12	79	30	38	--	--	--	--	--	--
9	Low flow	M 12 to 13	194	104	54	--	--	--	--	--	--
	High flow	M 12 to 13	133	70	53	--	--	--	--	--	--
13	Low flow	M 20 to 23	243	206	85	82[d]	49	78[d]	47	17[d]	10[e]
	High flow	M 20 to 23	95	84	88	28[d]	45	24[d]	38	10[d]	16[f]
	rpm										
20	Constant low flow										
	670	M 24	109	108	99	102	94	97	89	73	67
	885	M 24	106	99	93	90	85	86	81	55	52
	1,070	M 24	100	77	77	69	69	69	69	43	43
21	Constant high flow										
	685	TI 9	125	95	76	117	94	92	74	18	14
	885	TI 9	139	104	75	129	92	85	61	5	4
	1,090	TI 9	204	73	36	185	91	171	84	0	0
	Flow (gpm)										
22	Constant rpm										
	129	TI 7	117	74	63	30	26	9	8	1	1
	198	TI 7	35	24	69	15	43	9	26	7	20
	277	TI 7	70	44	63	19	27	7	10	3	4

(a) See also data from Experiment 7b in Table B-2.
(b) M indicates larval source was Moncks Corner Hatchery, South Carolina; TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York.
(c) Dashes indicate no data available.
(d) Indicates data used from specimens held in glass jars. Proportion surviving in glass jar times initial proportion surviving equals survival at latent observation interval.
(e) n = 141.
(f) n = 55.

TABLE B-5 RAW DATA FOR STRIPED BASS LARVAE USED IN FEEDING EXPERIMENTS, HOLDING CONTAINER EXPERIMENTS, AND HELD AS CONTROLS

Experiment Number	Variables	Larval Source and Age (days)(a)	Observation: Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
23	Fed in jars	M 11 to 17	171	100	--(b)	--	--	--	129	75
23	Fed in flow-through containers	M 11 to 17	139	100	--	--	--	--	24	17
23	Unfed in jars	M 11 to 17	148	100	--	--	--	--	102	70
23	Unfed in flow-through containers	M 11 to 17	132	100	--	--	--	--	13	10
4c	Unfed in jars	M 20	110	100	110	100	79	72	73	66
18c	Unfed in jars	M 18	24	100	23	96	23	96	21	88
19c	Unfed in jars	M 19	28	100	--	--	24	86	16	57
4c,18c,19c	Pooled	M 18 to 20	162	100	--	--	--	--	110	68
4c	Unfed in flow-through containers	M 20	110	100	105	95	49	45	20	18
18c	Unfed in flow-through containers	M 18	22	100	22	100	22	100	9	41
19c	Unfed in flow-through containers	M 19	27	100	--	--	24	89	5	19
4c,18c,19c	Pooled	M 18 to 20	159	100	--	--	--	--	34	21
	Unfed Controls Held in Jars									
6c		M 24	100	100	88	88	79	79	4	4
16c		M 26	100	100	99	99	98	98	11	11
5c		M 27 to 31	125	100	120	96	115	92	85	68
25c		TI 21	25	100	25	100	24	96	0	0
26c		TI 29	50	100	50	100	37	74	0	0
27c		TI 31	50	100	49	98	47	94	19	38
28c		TI 32	50	100	50	100	48	96	6	12
2c		TI 29	25	100	25	100	23	92	0	0
29c		TI 30	45	100	35	78	31	65	0	0

TABLE B-5 (CONT.)

Experiment Number	Variables	Larval Source and Age (days)(a)	Observation: Initial Number Alive	Initial Proportion Surviving	3 hours Number Alive	3 hours Proportion Surviving	12 hours Number Alive	12 hours Proportion Surviving	96 hours Number Alive	96 hours Proportion Surviving
6c,16c,5c	Pooled	M 24 to 32	325	100	307	94	292	90	100	31
25c,26c, 26c,28c, 2c,29c	Pooled	TI 21 to 32	245	100	234	96	210	86	25	10

(a) M indicates larval source was Moncks Corner Hatchery, South Carolina; TI indicates larval source was Texas Instruments' Verplankt Hatchery, New York.
(b) Dashes indicate no data available.

Report ORU71G4

BOWLINE POINT GENERATING STATION
ENTRAINMENT ABUNDANCE STUDIES

1977 ANNUAL REPORT

Prepared For:

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared By:

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

August 1978

CONTENTS

	Page
1. INTRODUCTION	1-1
2. SUMMARY	2-1
3. METHODS AND MATERIALS	3-1
3.1 CONTINUOUS AUTOMATED SAMPLING SYSTEM	3-1
3.2 NET COLLECTION	3-1
3.3 SAMPLE PROCESSING	3-6
4. RESULTS AND DISCUSSION	4-1
4.1 SPECIES COMPOSITION--DISCHARGE SAMPLING	4-1
4.1.1 Selected Species	4-1
4.2 SPECIES COMPOSITION--INTAKE SAMPLING	4-22
4.2.1 Selected Species	4-22
REFERENCES	
APPENDIX A: BOWLINE POINT PUMPED ENTRAINMENT ABUNDANCE - DISCHARGE	
APPENDIX B: BOWLINE POINT NET ENTRAINMENT ABUNDANCE - INTAKE	

LIST OF FIGURES

Number	
1-1	Diagram of Bowline Point plant site.
1-2	Mean seasonal ambient water temperature measured at the Bowline Point plant intake, 1977.
1-3	Mean seasonal ambient water conductivity measured at the Bowline Point plant intake, 1977.
3-1	Schematic diagram of the automatic abundance sampler.
3-2	Schematic representation of the sampling apparatus used to determine ichthyoplankton abundance at the intake.
4-1	Daily densities of fish larvae and juveniles collected at the Bowline Point plant discharge during 1977.
4-2	Length-frequency distributions of fish larvae collected at the Bowline Point plant discharge, 1977.
4-3	Diel distribution of bay anchovy post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.
4-4	Diel distribution of Atlantic tomcod yolk-sac larvae collected at the Bowline Point plant discharge, 8-22 March 1977.
4-5	Diel distribution of striped bass post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.
4-6	Diel distribution of white perch post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.
4-7	Diel distribution of clupeid post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.
4-8	Daily densities of fish larvae and juveniles collected at the Bowline Point plant intake during 1977.

LIST OF TABLES

Number	
3-1	Summary of the primary changes in the entrainment abundance sampling program made at the Bowline Point plant from 1975 to 1977.
3-2	Bowline Point plant intake through-net velocities as a function of tidal height, circulator pump operation, and sampling depth.
3-3	List of primary literature sources used in laboratory identification of ichthyoplankton.
4-1	Number and percent composition by life stage of ichthyoplankton collected during abundance sampling at the Bowline Point plant discharge, 1977.
4-2	Length-frequency distribution of bay anchovy and weekly mean, range, and standard deviation of lengths in collections at the Bowline Point plant during 1977.
4-3	Diel distribution of bay anchovy larvae in collections from the Bowline Point plant discharge during 1977.
4-4	Length-frequency distribution of Atlantic tomcod and weekly mean, range, and standard deviation of lengths in collections at the Bowline Point plant discharge during 1977.
4-5	Diel distribution of Atlantic tomcod yolk-sac larvae in collections from the Bowline Point plant discharge during 1977.
4-6	Length-frequency distribution of striped bass and weekly mean, range, and standard deviation of length in collections at the Bowline Point discharge during 1977.
4-7	Diel distribution of striped bass larvae in entrainment collections from the Bowline Point plant discharge during 1977.
4-8	Length-frequency distribution of white perch and weekly mean, range, and standard deviation of lengths in entrainment collections from the Bowline Point plant discharge during 1977.
4-9	Diel distribution of white perch larvae in entrainment collections from the Bowline Point plant discharge during 1977.
4-10	Length-frequency distribution of clupeids and weekly mean, range, and standard deviation of lengths in entrainment collections from the Bowline Point plant discharge during 1977.
4-11	Diel distribution of clupeid larvae in entrainment collections from the Bowline Point plant discharge during 1977.

LIST OF TABLES (CONT.)

Number	
4-12	Number and percent composition by life stage of ichthyoplankton collected by nets during abundance sampling at the Bowline Point plant intake, 1977.
4-13	Relative proportions of selected species and life stages of ichthyoplankton collected from various depths at the Bowline Point plant intake, 1977.
A-1	Volume weighted average density of bay anchovy in entrainment collections from the Bowline Point plant discharge during 1977.
A-2	Volume weighted average density of Atlantic tomcod in entrainment collections from the Bowline Point plant discharge during 1977.
A-3	Volume weighted average density of striped bass in entrainment collections from the Bowline Point plant discharge during 1977.
A-4	Volume weighted average density of white perch in entrainment collections from the Bowline Point plant discharge during 1977.
A-5	Volume weighted average density of clupeids in entrainment collections from the Bowline Point plant discharge during 1977.
B-1	Volume weighted average density of Atlantic tomcod by life stage and sample date from intake collections at the Bowline Point plant, 1977.
B-2	Volume weighted average density of bay anchovy by life stage and sample date from intake collections at the Bowline Point plant, 1977.
B-3	Volume weighted average density of striped bass by life stage and sample date from intake collections at the Bowline Point plant, 1977.
B-4	Volume weighted average density of white perch by life stage and sample date from intake collections at the Bowline Point plant, 1977.
B-5	Volume weighted average density of clupeids by life stage and sample date from intake collections at the Bowline Point plant, 1977.

CHAPTER 1: INTRODUCTION

The Bowline Point Generating Station is located on the west bank of the Hudson River estuary at mile point 37.5 (60 km). The river reaches its widest expanse in this area and is relatively shallow compared with the area just north of the plant. The Bowline Point plant consists of two completely enclosed oil- and gas-fired steam-electric units, each of which has a nominal net generating capability rating of 600 MWe and a maximum gross capability of 622 MWe. Unit 1 has been in operation since September 1972 and Unit 2 began commercial operation in May 1974. Each unit has a separate once-through cooling water system that transfers waste heat from the condensers to the Hudson River.

Cooling water for each unit is pumped from an intake structure on the northeast shore of Bowline Pond (Figure 1-1), which is connected with the Hudson River estuary via a narrow, shallow inlet. The intake structure is 43 m (140 ft) wide, about 8 m (27 ft) deep at mean water level and consists of six bays, three for each unit. Each bay is approximately 5 m (16 ft) wide and equipped with a bar trash rack, a traveling screen, and a 700 m^3/min (185,000 gpm) circulating water pump. Aquatic organisms small enough to pass through the traveling screen are entrained with the cooling water through the condenser and discharged back into the Hudson River perpendicular to the direction of flow through multiport, high-velocity diffusers.

During 1977, studies were conducted at the Bowline Point plant to identify and enumerate the ichthyoplankton populations entrained in the plant cooling water system. These studies were designed to quantify the seasonal densities, species and life-stage composition, and length-frequency distribution of entrained fish. Special emphasis was placed on striped bass (Morone saxatilis), white perch (Morone americana), Atlantic tomcod (Microgadus tomcod), bay anchovy (Anchoa mitchilli), and clupeids (primarily consisting of American shad [Alosa sapidissima], alewife [Alosa pseudoharengus], and blueback herring [Alosa aestivalis])

At least four 24-hour samples were collected weekly between 3 February and 31 August to provide entrainment abundance data during the major periods when the Hudson River is utilized as a spawning and nursery area. Continuous 24-hour sampling also permitted quantification of abundance for species that infrequently occurred in entrainment collections. Two additional days were sampled each week during periods of peak egg and larval abundance; in order to identify diel abundance patterns, one of these days was divided into eight 3-hour sampling periods. Day-night variation and vertical distribution at the intake structure were monitored with nets during periods of peak larval density.

Physicochemical variables such as temperature and conductivity can influence the temporal and spatial occurrence of ichthyoplankton. The seasonal ambient river temperature profile in the vicinity of Bowline Point is typical of a temperate estuary. Daily water temperatures recorded at the Bowline Point plant intake (Figure 1-2) reflect this pattern although they may occasionally be influenced by recirculation of water from the discharge. Since the Bow-

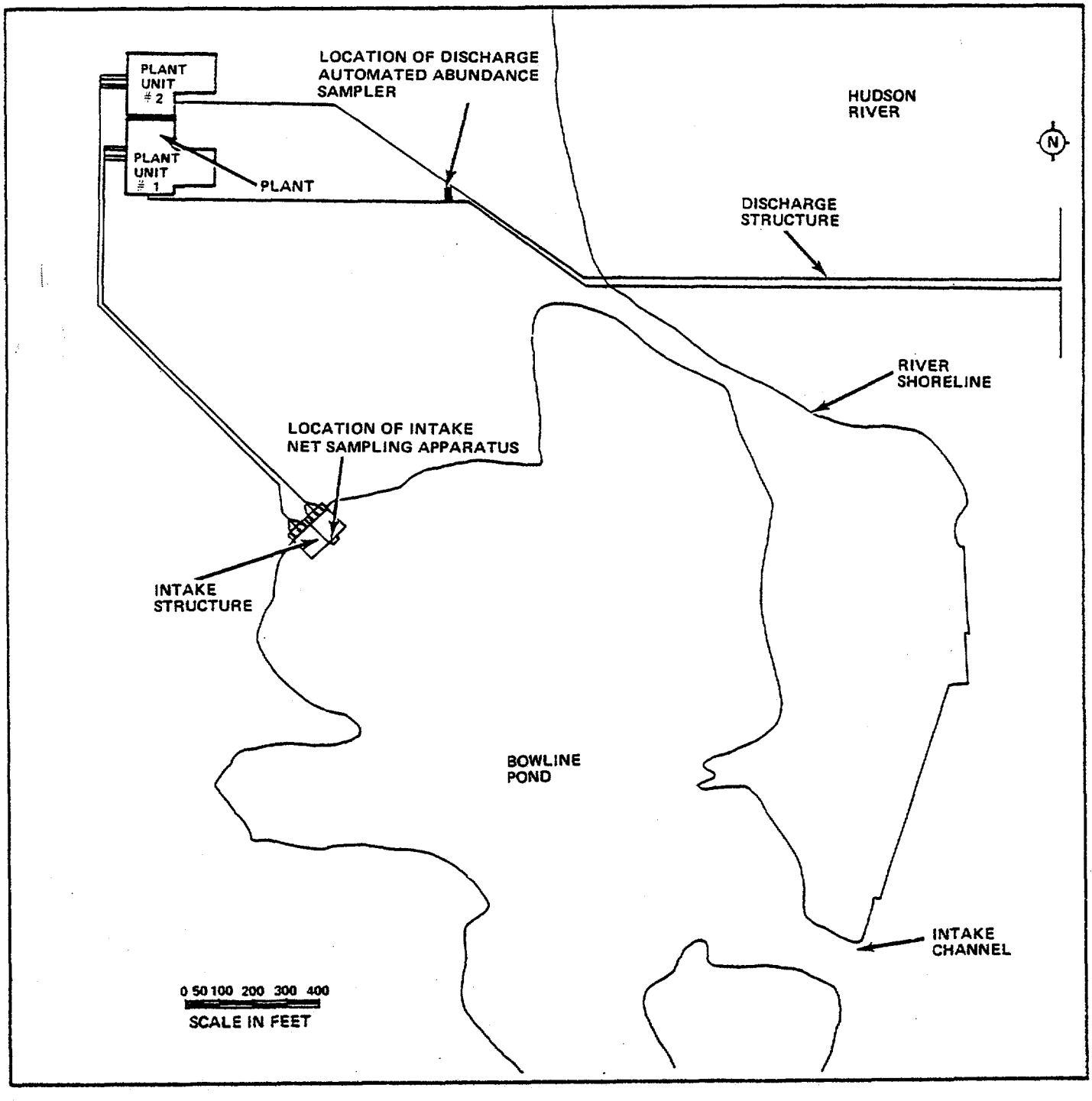


Figure 1-1. Diagram of Bowline Point plant site.

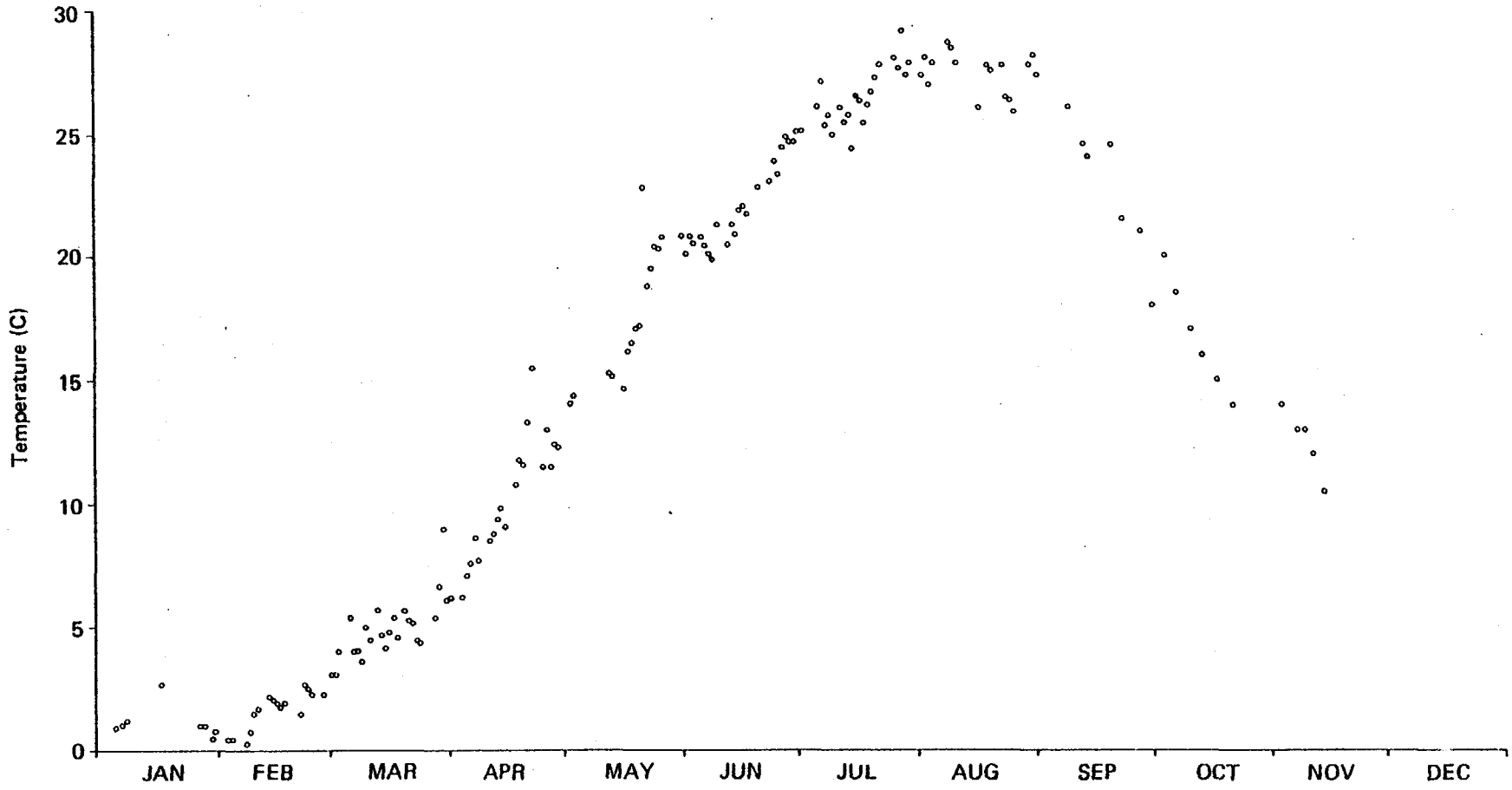


Figure 1-2. Mean seasonal ambient water temperature measured at the Bowline Point plant intake, 1977.

line Point plant is located in the transitional portion of the estuary, conductivity is highly variable depending on freshwater flow and tidal mixing. Conductivity recorded at the intake (Figure 1-3) reflects this variability.

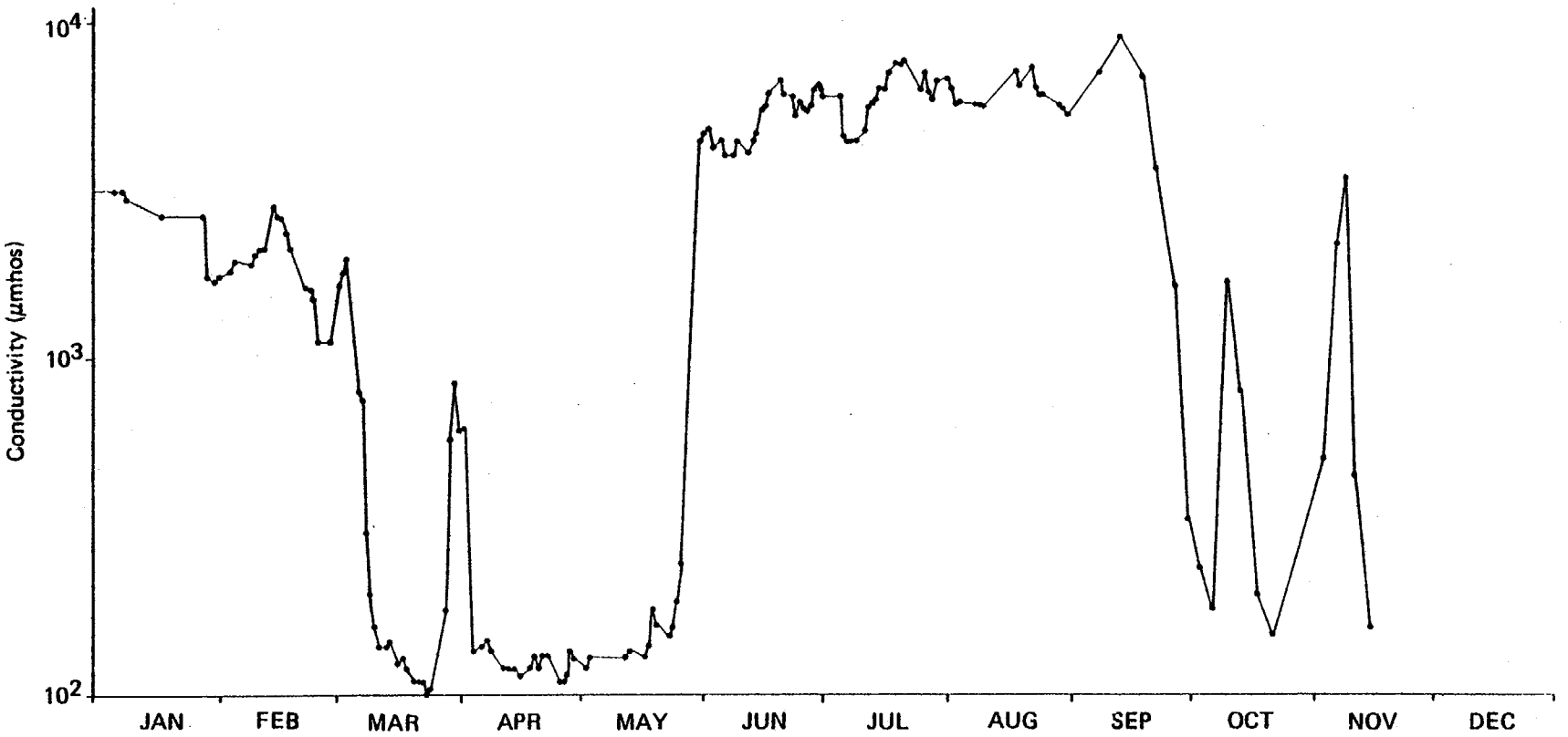


Figure 1-3. Water conductivity measured at the Bowline Point plant intake, 1977.

CHAPTER 2: SUMMARY

Ichthyoplankton entrainment abundance was examined by means of an automated pump system at the Bowline Point Generating Station discharge and nets at three depths at the intake. Atlantic tomcod, bay anchovy, striped bass, white perch, and clupeids composed the majority of both intake (98.3 percent) and discharge (97.9 percent) samples. Mean larval densities for these five species were generally comparable between the intake nets and discharge pump.

Peak abundance of yolk-sac Atlantic tomcod occurred in mid-March, while post-yolk-sac striped bass, white perch, and clupeids peaked in early June. Bay anchovy larvae exhibited highest abundance in mid-July.

Depth interval samples with nets at the intake indicated that densities were generally greatest at mid and bottom depths.

Diel sampling at the discharge indicated that peak abundance of clupeids and bay anchovy occurred between 2100 and 0600 hours. Atlantic tomcod abundance peaked near dusk from 1800 to 2100 hours. Striped bass and white perch exhibited variable diel distribution of abundance with no consistent, distinct peaks.

CHAPTER 3: METHODS AND MATERIALS

The studies described in this report represent the third year of abundance sampling by Ecological Analysts, Inc. for ichthyoplankton entrained at the Bowline Point plant. Several changes in sampling gear and frequency were initiated between 1975 and 1977 and are summarized in Table 3-1. These changes primarily reflect increased sampling effort during the period of peak abundance and the development of an automated sampling pump system used at the discharge station.

3.1 CONTINUOUS AUTOMATED SAMPLING SYSTEM

Samples were collected from the Bowline Point Unit I discharge pipe using an automated abundance sampler (Figure 3-1). Water was pumped into the system using a 7.6-cm (3-in.) electric pump which collected water via a line inserted 3 ft into the discharge pipe. Samples were collected for 24 continuous hours in a tank-net system, composed of an inverted 505-μ mesh plankton net mounted in a tank 1.0 m in diameter and 1.2 m in depth. The pump automatically shut down every hour while the net rinsed. This rinse cycle lasted approximately 2 minutes. After each rinse, the sample was concentrated in a secondary unit and preserved with 10 percent formalin. At the end of 24 hours, samples were collected in a cod-end container; 24-hour samples were a composite of 24 1-hour samples. During periods of maximum larval densities, three 1-hour samples were composited; eight separate composite samples were collected in a 24-hour period. After each collection period (3 or 24 hours) the sample was promptly transferred to a labeled 800-ml glass jar and preserved with 10 percent formalin. Sample volumes were measured with a calibrated 7.6-cm (3-in.) in-line flowmeter. Sample duration and number of cycles were automatically registered by a mechanical recorder. Water quality analyses were performed at the initiation and termination of each sample to monitor ambient water temperature, conductivity, dissolved oxygen, and pH.

3.2 NET COLLECTION

Surface, middle, and bottom depths were sampled simultaneously with three 0.5-m, 505-μ mesh conical plankton nets which were lowered on a rigid frame parallel to and in front of the Unit 1 trash racks (Figure 3-2). Samples began and ended when the bottom net reached the water surface. Two consecutive 30-minute samples were collected at both noon and midnight. At the completion of each 30-minute collection period the nets were thoroughly rinsed into the cod-end containers. The samples were then transferred to labeled 800-ml glass jars and preserved with 10 percent formalin.

The volume of water filtered during each sample period was used to convert abundance data to organism densities. Through-net velocities measured with a Cushing electromagnetic flowmeter were used to develop an intake water flow velocity (cm/sec) matrix (Table 3-2). Flowmeter values were recorded over a range of tidal and plant operating conditions for each sample depth (i.e., surface, middle, and bottom). These values were then used to estimate volume of water filtered at each sample depth for a sample under any observed combination of tidal and plant operating conditions according to the following relationship:

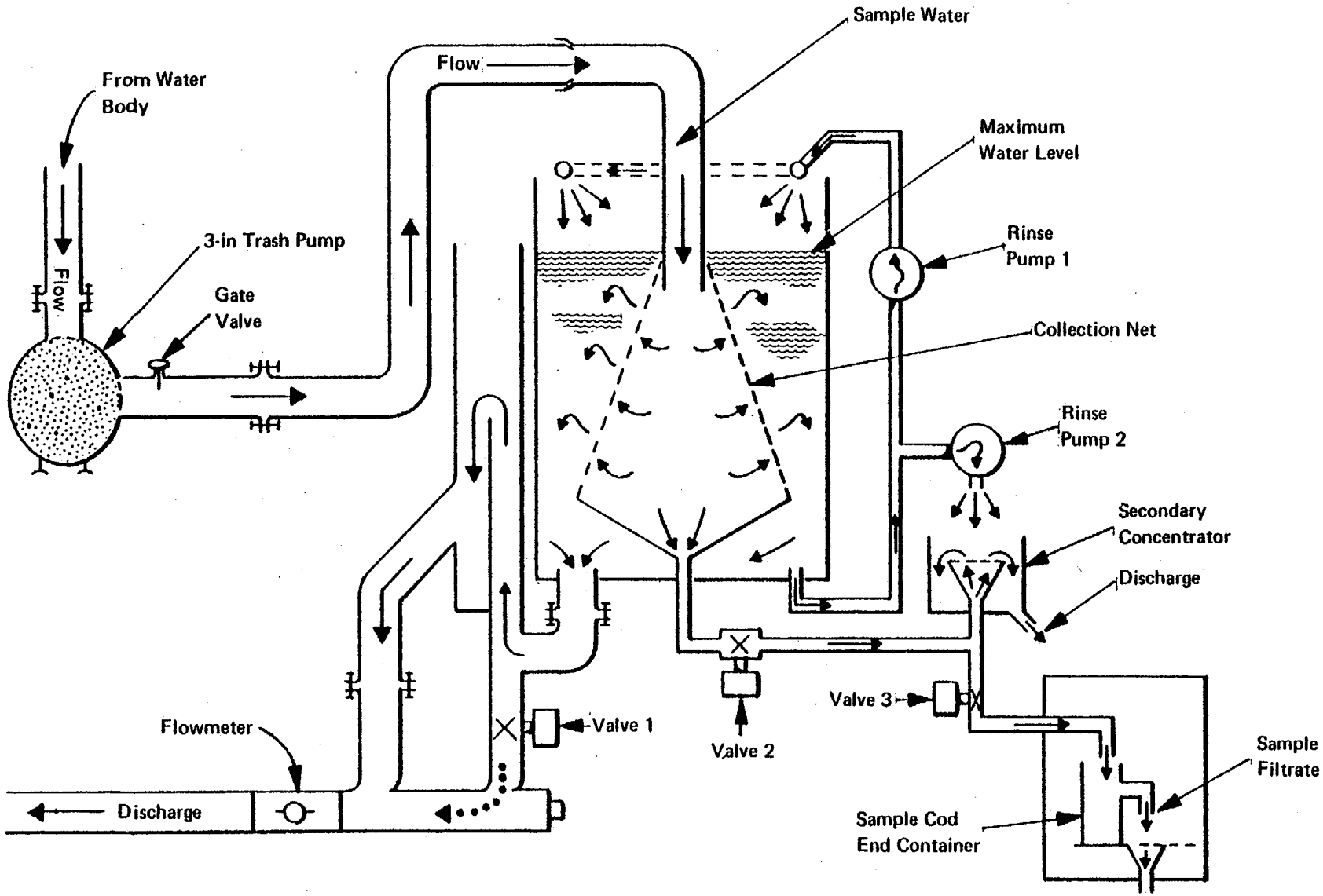


Figure 3-1. Schematic diagram of the automatic abundance sampler.

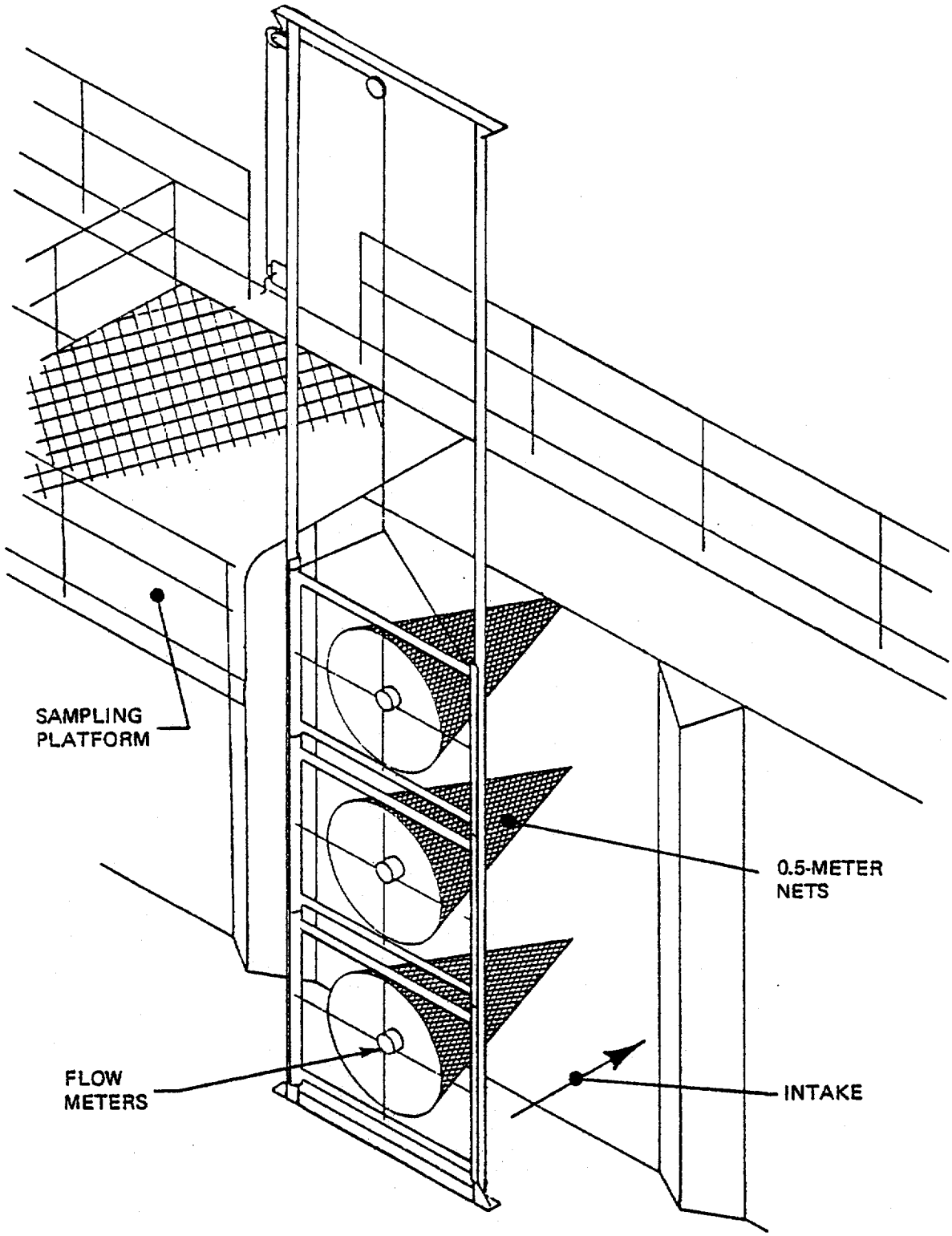


Figure 3-2. Schematic representation of the sampling apparatus used to determine ichthyoplankton abundance at the intake.

TABLE 3-1 SUMMARY OF THE PRIMARY CHANGES IN THE ENTRAINMENT ABUNDANCE SAMPLING PROGRAM MADE AT THE BOWLINE POINT PLANT FROM 1975 TO 1977

Year	Station	Sampling Device	Sampling Season	Sampling Frequency	Diel Schedule[a]	Sample Duration (min)	Sample Depth[b]
1975	Intake	505-μ net	FEB-OCT	1 day/week	N,S,M,S	5-90[c]	S,M,B
1976	Intake	505-μ net	FEB-SEP	1 day/week	N,S,M,S	30	S,M,B
	Intake	4-in. pump manifold	FEB-SEP	1 day/week	N,S,M,S	30	S,M,B
	Discharge	3-in. pump-505-μ net	JUN-AUG	1-4 days/weeks	Sunset	3 hours	1 m into 3.2-m diameter discharge pipe
1977	Intake	505-μ net	FEB-AUG	1-2 days/weeks	N,M	30	S,M,B
	Discharge	Autosampler 3-in. pump 505-μ net	FEB-AUG	4-6 days/weeks	8 3-hr samples[d]	24 hours	1 m into 3.2-m diameter discharge pipe

(a) N,S,M,S = noon, sunset, midnight, sunrise.
(b) S,M,B = surface, middle, bottom.
(c) Sample duration was changed during 1975 to determine optimal duration which would minimize net clogging and maximize sample volume.
(d) Diel sampling occurred on one day each week during peak abundance; all other days were 24-hour composites.

TABLE 3-2 BOWLINE POINT PLANT INTAKE THROUGH-NET VELOCITIES AS A FUNCTION OF TIDAL HEIGHT, CIRCULATOR PUMP OPERATION, AND SAMPLING DEPTH

	Intake Through-Net Velocities (cm/sec)			
Tidal Height Range (m)	(-0.5)-(-0.1)	(0.0)-(+0.3)	(+0.4) - (+0.7)	(+0.8)-(+1.1)
Pump operation depth		2 Pumps Full[a]		
Surface	10.7±1.4[b](6)[c]	10.4±2.6(11)	10.7±1.6(10)	9.3±1.4(8)
Middle	12.8±2.3(3)	10.2±1.0(4)	12.4±4.3(2)	10.2±1.3(6)
Bottom	15.4±2.3(4)	12.8±3.8(3)	13.7±1.9(6)	10.9±3.8(4)
Pump operation depth		2 Pumps Throttled[a]		
Surface	9.0*	9.5*	7.3*	6.4*
Middle	10.9*	9.3*	8.6*	7.0*
Bottom	13.1±1.1(8)	11.6±0.5(5)	9.4±1.9(10)	7.5*
Pump operation depth		3 Pumps Full		
Surface	10.6*	12.6*	10.3*	10.8*
Middle	12.8±0.6(8)	12.4±0.9(7)	11.9±0.5(6)	11.9±0.6(2)
Bottom	15.3*	15.7*	13.1*	12.6*

(a) Includes various combinations of the three Unit 1 circulator pumps.
(b) Mean ± standard deviation.
(c) Number of data sets used for velocity determination; one data set composed of six readings from Cushing electromagnetic flowmeter.

Note: * indicates values extrapolated based on depth/tide relationships for two-pump full operation.

$$V = A \cdot t \cdot v$$

where

V = volume filtered (m^3)
A = net cross-sectional area (m^2)
t = sample duration (minutes)
v = flow velocity through nets (m/minute).

During each collection the flowmeter was attached alternately to the middle or bottom net to determine if clogging of the net surface had occurred.

3.3 SAMPLE PROCESSING

Samples were preserved onsite in separate 800-ml glass jars with 10 percent formalin and transported to laboratory facilities for initial workup and quality control analysis. In the laboratory, samples were transferred to blackened pyrex trays, sorted, and enumerated by life stage. Ichthyoplankton specimens were removed from each sample, placed in vials according to life stage and preserved with 5 percent formalin. Each specimen from the vials was identified to family or species with emphasis on the most abundant species. Owing to the extreme difficulty involved in differentiating the early life stages of alewife and blueback herring, these two species have been grouped under the name clupeids. American shad and other species in the family Clupeidae were identified to the species level. Identification was facilitated by available literature (Table 3-3) and an ichthyoplankton reference collection.

The identification of rare or unusual specimens was verified by a specialist in ichthyoplankton taxonomy. Length was measured on selected diel and net samples and the most abundant species. Quality control procedures were applied to both sorting and identification (proportion defective analysis). This is an acceptance sampling procedure which selects 7 out of 50 samples at random for rework. The procedure provides an average outgoing quality level (AOQL) of no more than 10 percent error rate.

TABLE 3-3 LIST OF PRIMARY LITERATURE SOURCES USED IN LABORATORY IDENTIFICATION OF ICHTHYOPLANKTON

Chambers et al. 1969
Cianci 1969
Mansueti and Hardy 1967
Scotton et al. 1973
Leim 1924
Lippson and Moran 1974
Hildebrand and Schroeder 1928
Bigelow and Schroeder 1953
Booth 1967
Mansueti 1958
Bayless 1972
Doroshev 1970
Rathjen and Miller 1957
Dovel and Edmonds 1971
Krester 1968
Bath 1974
Wang and Kernehan (in press)

CHAPTER 4: RESULTS AND DISCUSSION

4.1 SPECIES COMPOSITION AND ABUNDANCE--DISCHARGE SAMPLING

Entrainment abundance and species composition were determined from the 24-hour samples collected at the discharge. Bay anchovy larvae accounted for 69.8 percent of all ichthyoplankton entrained during 1977 (Table 4-1). The next four most abundant taxa were Atlantic tomcod, striped bass, white perch, and clupeids. There was an increase in total number of species collected in 1977 compared with 1975 and 1976 (Ecological Analysts 1976, 1977) which can be attributed to the increased sampling effort provided by the automated sampling system.

4.1.1 Selected Species

4.1.1.1 Bay Anchovy

Bay anchovy spawn throughout the summer. Larvae were collected in relatively high numbers from late June through August (Appendix Table A-1). Densities were variable throughout this period (Figure 4-1); however, peak concentrations were observed on 19 July (1,793/1,000 m^3). Larvae collected during this period ranged from 3 to 48 mm in length (Table 4-2). Mean length varied substantially between sample dates, although no particular length group appeared to be more vulnerable to entrainment (Figure 4-2). The variability observed in bay anchovy larval density and length distribution reflects the extended spawning season and the effect of salt-front movement on spawning location and larval distribution (Orange and Rockland Utilities 1978).

Bay anchovy entrained at the Bowline Point plant exhibited a distinct diel pattern of abundance (Figure 4-3; Table 4-3). Peak densities were observed from 2100 to 0600 hours with the maximum at 2400 hours. Densities were substantially lower during daylight hours.

4.1.1.2 Atlantic Tomcod

Atlantic tomcod spawn in the Hudson River primarily from December to February. Peak abundance of yolk-sac larvae in the Bowline Point area was observed in mid-March (Figure 4-1, Appendix Table A-2). A few post-yolk-sac larvae and early juveniles were collected with peaks in late March and late May, respectively. Peak densities occurred at an ambient river temperature of 4.5 C and 140 µmho conductivity. The period of maximum abundance (densities exceeded 500 larvae/1,000 m^3) occurred from 12 to 15 March, although a secondary peak was observed on 31 March. Entrained tomcod ranged from 6 to 47 mm in length; however, 91.6 percent of those measured were less than 9 mm (Table 4-4, Figure 4-2).

Atlantic tomcod yolk-sac larvae showed a pronounced diel distribution (Figure 4-4, Table 4-5). Larval density progressively increased throughout the day to peak abundance after dusk between 1800 and 2100 hours. Densities gradually decreased following this peak with minimum densities observed from 0600 to 0900 hours.

TABLE 4-1 NUMBER AND PERCENT COMPOSITION BY LIFE STAGE OF ICHTHYOPLANKTON COLLECTED DURING ABUNDANCE SAMPLING AT THE BOWLINE POINT PLANT DISCHARGE, 1977

Species	Life Stage[a]	Number Collected	Percent Composition
Bay anchovy	LAR	13,375	69.8
Atlantic tomcod	YSL	2,366	12.3
Striped bass	LAR	763	4.0
Unidentified*	LAR	485	2.5
White perch	EGG	405	2.1
Bay anchovy	JUV	258	1.3
Clupeids	LAR	248	1.3
White perch	LAR	227	1.2
Morone spp.	LAR	214	1.1
Silversides	LAR	145	0.8
Striped bass	JUV	135	0.7
Hogchoker	LAR	108	0.6
Atlantic tomcod	LAR	70	0.4
Clupeids	EGG	69	0.4
American eel	JUV	52	0.3
Striped bass	YSL	33	0.2
Bay anchovy	EGG	30	0.2
Rainbow smelt	LAR	22	0.1
Sunfish	LAR	20	0.1
White perch	JUV	19	0.1
Northern pipefish	JUV	16	0.1
Atlantic silverside	LAR	14	0.1
Atlantic tomcod	JUV	10	0.1
Unidentified*	EGG	9	0.0
Rainbow smelt	JUV	8	0.0
Clupeids	JUV	7	0.0
White perch	YSL	7	0.0
Tessellated darter	YSL	7	0.0
Minnows	LAR	6	0.0
American shad	LAR	4	0.0
Hogchoker	JUV	4	0.0
Unidentified*	JUV	4	0.0
Killifish	LAR	4	0.0
Killifish	JUV	3	0.0
Clupeids	YSL	3	0.0

(a) EGG = egg; YSL = yolk-sac larvae; LAR = larvae; JUV = juvenile.

Note: * indicates that organisms were damaged; 54 percent of the damaged larvae occurred during the period of peak bay anchovy abundance (after 6 July). Abundance of species other than bay anchovy in samples collected during this period was very low. Other damaged organisms were collected throughout the sampling period when striped bass, white perch, clupeids, and bay anchovy were abundant.

TABLE 4-1 (CONT.)

Species	Life Stage[a]	Number Collected	Percent Composition
Hogchoker	YSL	3	0.0
Weakfish	JUV	2	0.0
Silversides	JUV	1	0.0
Striped bass	EGG	1	0.0
Winter flounder	LAR	1	0.0
Yellow perch	YSL	1	0.0
Unidentified	EGG	1	0.0
Atlantic tomcod	EGG	1	0.0
Walleye	LAR	1	0.0
Weakfish	LAR	1	0.0
Cyprinids	YSL	1	0.0
Unidentified	YSL	1	0.0

(a) EGG = egg; YSL = yolk-sac larvae; LAR = larvae; JUV = juvenile.

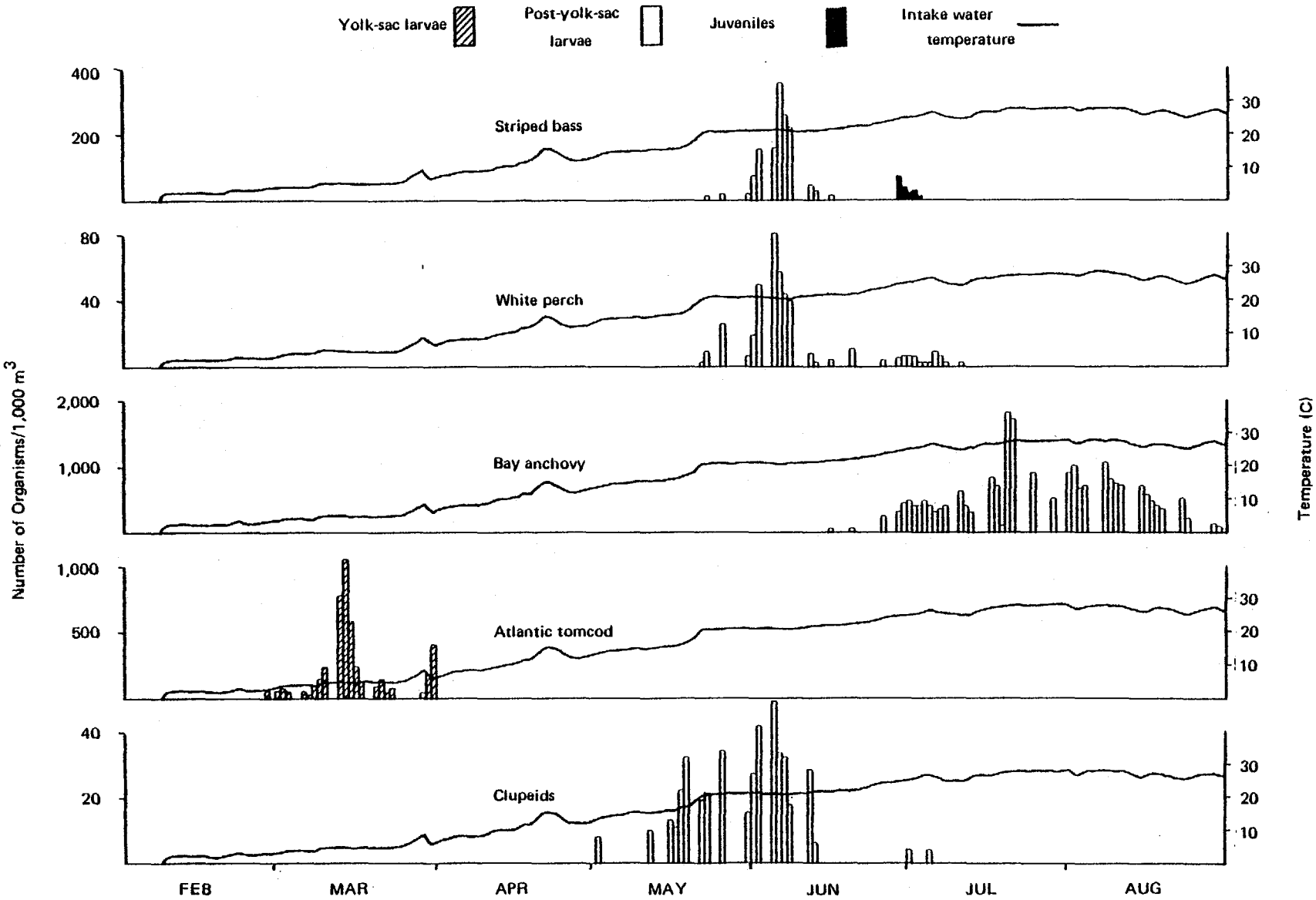


Figure 4-1. Daily densities of fish larvae and juveniles collected at the Bowline Point plant discharge during 1977.

TABLE 4-2 LENGTH-FREQUENCY DISTRIBUTION OF BAY ANCHOVY AND WEEKLY MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS IN COLLECTIONS AT THE BOWLINE POINT PLANT DURING 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
17 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
3 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
10 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
7 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
26 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
8 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
16 JUN	7	6.4	1.8	0	2	4	1	0	0	0	0	0	4.0	6.0	10.0
21 JUN	13	8.5	2.1	0	1	5	6	1	0	0	0	0	5.0	9.0	13.0
2 JUL	93	16.0	4.5	0	4	1	9	13	28	22	13	3	3.0	16.0	25.0
8 JUL	151	14.8	6.2	0	3	36	14	16	21	25	26	10	3.0	15.0	26.0
13 JUL	131	16.2	5.5	0	5	11	10	17	30	27	21	10	3.0	16.0	27.0
21 JUL	26	18.7	2.7	0	0	0	0	0	9	13	3	1	15.0	18.0	28.0
29 JUL	52	11.3	6.4	0	2	18	16	10	1	2	0	3	3.0	9.0	41.0
4 AUG	67	19.2	7.7	0	0	7	7	1	12	11	13	16	6.0	19.0	38.0
11 AUG	22	15.0	11.3	1	3	4	5	0	0	3	4	2	2.0	10.5	48.0
19 AUG	43	24.1	7.2	0	1	1	0	2	2	4	9	24	4.0	24.0	45.0
24 AUG	52	20.9	6.1	0	0	2	2	3	8	9	7	21	7.0	21.0	36.0
31 AUG	5	25.6	4.9	0	0	0	0	0	0	1	1	3	19.0	24.0	33.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

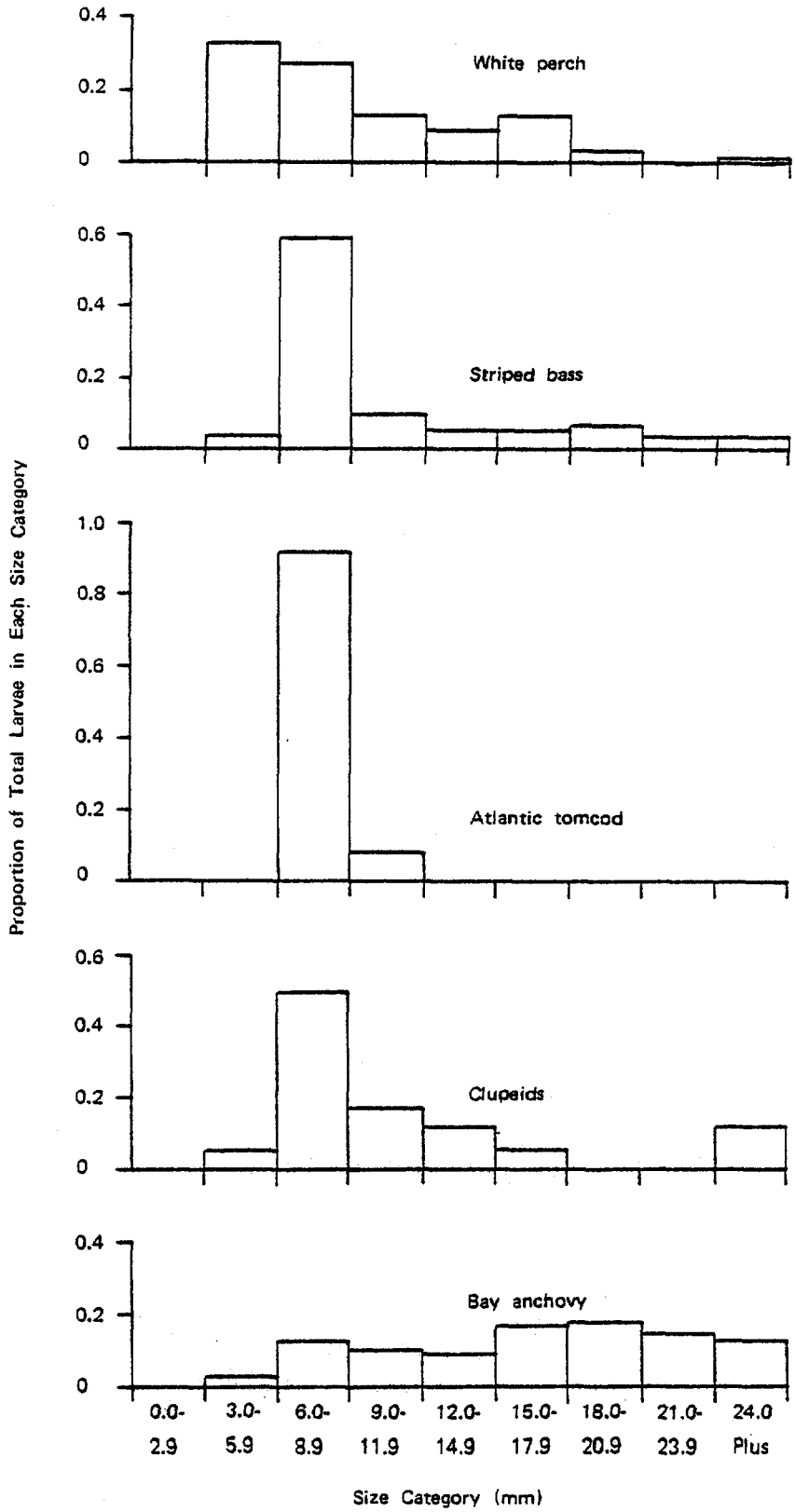


Figure 4-2. Length-frequency distributions of fish larvae collected at the Bowline Point plant discharge, 1977.

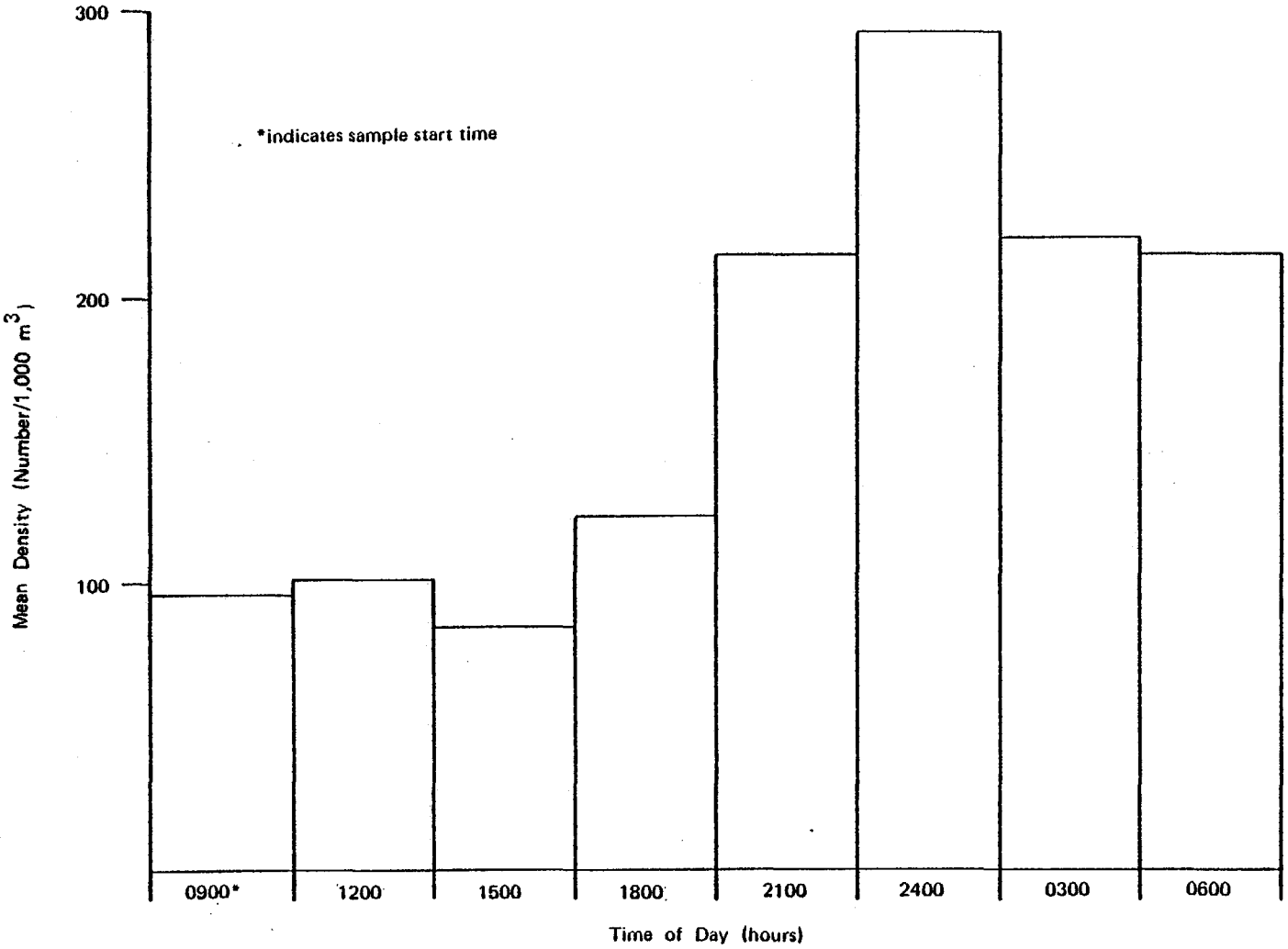


Figure 4-3. Diel distribution of bay anchovy post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.

TABLE 4-3 DIEL DISTRIBUTION OF BAY ANCHOVY LARVAE IN COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

	Number/1,000 m^3							
Date	0900[a]	1200	1500	1800	2100	2400	0300	0600
6 JUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13 JUN	0.0	17.6	0.0	15.4	0.0	0.0	18.9	0.0
20 JUN	36.8	--[b]	20.9	--[b]	53.4	14.8	42.6	47.2
28 JUN	79.8	130.9	127.0	330.3	--[c]	177.3	194.0	78.7
5 JUL	152.2	246.6	277.8	91.7	311.5	586.4	311.5	191.4
11 JUL[d]	307.9	111.5	93.5	179.6	712.0	980.4	762.9	975.2
Average	96.1	101.3	86.5	123.4	215.4	293.2	221.7	215.4

(a) Sample start time.
(b) Sample voided in order to assure comparability of samples when actual and scheduled start time differed by more than 30 minutes.
(c) Sample voided due to spillage.
(d) The primary effort of diel sampling was directed at the period of peak Morone abundance; therefore, no diel samples were collected after 11 July when bay anchovy reached peak abundance.

TABLE 4-4 LENGTH-FREQUENCY DISTRIBUTION OF ATLANTIC TOMCOD AND WEEKLY MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS IN COLLECTIONS AT THE BOWLINE POINT PLANT DISCHARGE DURING 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
17 FEB	2	6.5	0.5	0	0	2	0	0	0	0	0	0	6.0	6.5	7.0
24 FEB	5	7.2	0.4	0	0	5	0	0	0	0	0	0	7.0	7.0	8.0
3 MAR	60	7.2	0.5	0	0	60	0	0	0	0	0	0	6.0	7.0	8.0
10 MAR	93	7.0	0.6	0	0	92	1	0	0	0	0	0	6.0	7.0	10.0
17 MAR	251	6.8	0.5	0	0	251	0	0	0	0	0	0	6.0	7.0	8.0
23 MAR	106	6.7	0.5	0	0	106	0	0	0	0	0	0	6.0	7.0	8.0
31 MAR	97	8.5	0.9	0	0	48	49	0	0	0	0	0	6.0	9.0	11.0
7 APR	2	8.0	1.0	0	0	1	1	0	0	0	0	0	7.0	8.0	9.0
13 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 MAY	1	47.0	0.0	0	0	0	0	0	0	0	0	1	47.0	47.0	47.0
26 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
8 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
16 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
8 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
29 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

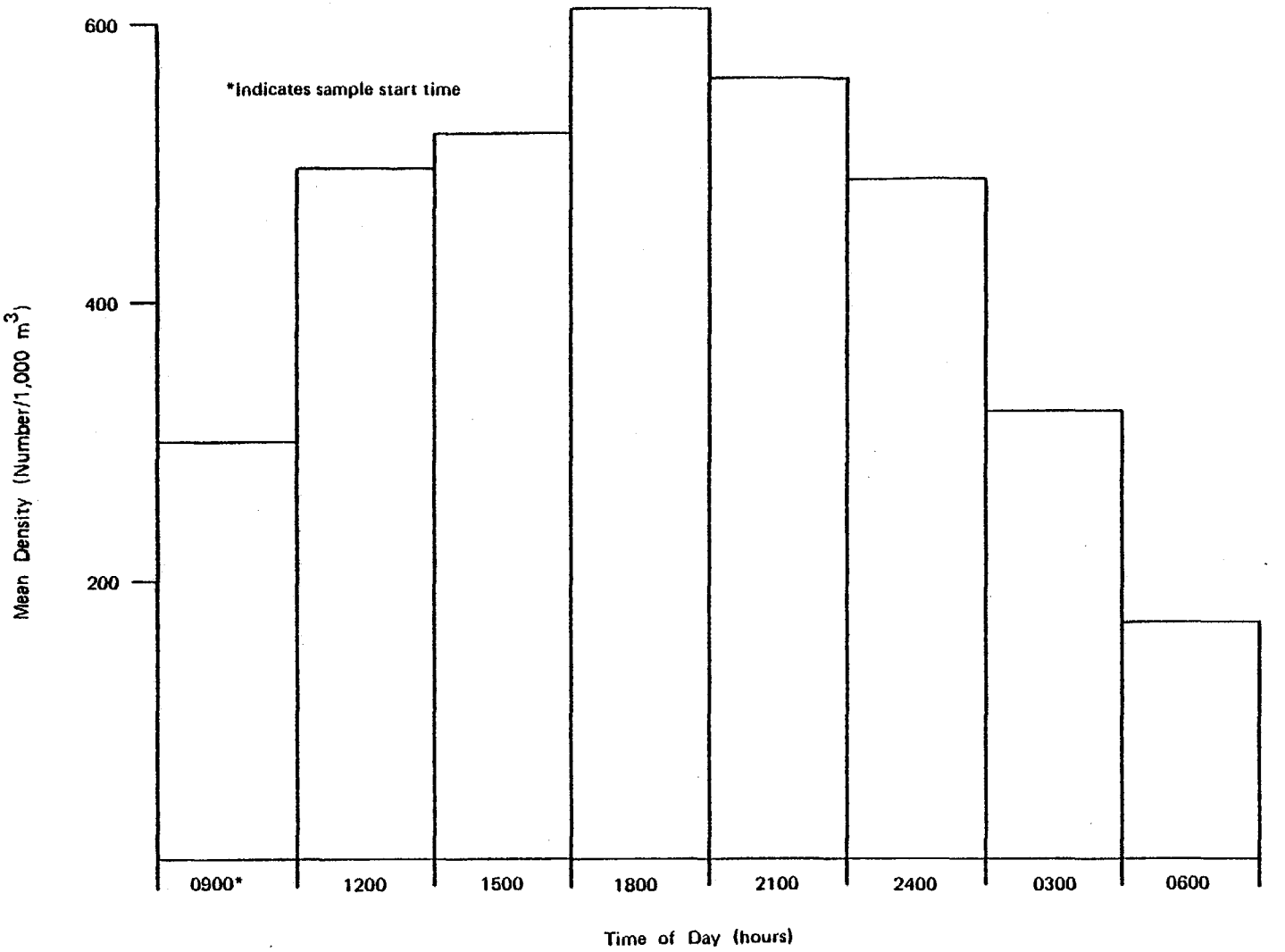


Figure 4-4. Diel distribution of Atlantic tomcod yolk-sac larvae collected at the Bowline Point plant discharge, 8-22 March 1977.

TABLE 4-5 DIEL DISTRIBUTION OF ATLANTIC TOMCOD YOLK-SAC LARVAE IN COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

	Number/1,000 m^3							
Date	0900*	1200	1500	1800	2100	2400	0300	0600
8 MAR	90.5	91.6	63.8	244.3	122.5	120.7	66.1	129.0
14 MAR	600.6	1,150.3	1,341.7	1,500.0	1,447.2	1,194.0	782.2	443.1
21 MAR	209.3	244.6	162.5	89.0	109.6	147.5	120.1	93.5
Average	300.1	495.5	522.7	611.1	559.8	487.4	322.8	221.8

* Sample start time.

4.1.1.3 Striped Bass

Striped bass usually spawn in the Hudson River from late April to early June and peak larval abundance in entrainment collections occurred in early June during 1977 (Appendix Table A-3, Figure 4-1). Post-yolk-sac larvae were the most abundant life stage of striped bass collected; maximum density occurred from 2 to 8 June when ambient river temperature was approximately 20 C. This period of peak abundance agrees closely with the 1975 peak but was approximately 2 weeks earlier than in 1976. This difference appears to be related to differences in ambient river temperature which reached 20 C about 2 weeks later in 1976. Striped bass juveniles reached peak abundance in entrainment collections during the last week in June.

Striped bass collected during this period ranged from 5 to 56 mm in length. Post-yolk-sac larvae ranging from 6 to 8.9 mm were the most abundant size group (Figure 4-2, Table 4-6). This size range was composed of 59.1 percent of all striped bass measured, and reflected the narrow size range of one large sample collected on 8 June. No consistent distinct diel distribution of striped bass larvae was observed during this period. Although diel abundance appeared to be patchy (Figure 4-5), diel patterns may have been biased by the relatively low numbers collected on 5 of the 6 diel sampling days (Table 4-7).

4.1.1.4 White Perch

White perch generally spawn in the Hudson River during May and June. Eggs were collected from mid-May to late June with peak densities from 16 to 23 May (Appendix Table A-4). Few yolk-sac larvae were collected; however, post-yolk-sac larval abundance peaked from 2 to 8 June (Figure 4-1). White perch collected during this period ranged from 3 to 25 mm, but larvae less than 9 mm constituted 59.3 percent of those measured (Figure 4-2, Table 4-8).

White perch demonstrated no pronounced diel trend (Figure 4-6, Table 4-9). Temporal abundance was highly variable with a high incidence of zero abundance samples outside of the peak abundance period; only the 6 June diel samples occurred during the peak in post-larval abundance.

4.1.1.5 Clupeids

Members of the clupeid family (alewife, American shad, and blueback herring) spawn primarily in the freshwater north of the Bowline Point site. The maximum concentration was 50 clupeid larvae (alewife and blueback herring) per 1,000 m^3 at the Bowline Point plant. American shad were rarely collected during abundance sampling. Spawning of these three clupeids overlap temporally and range from April through June in the Hudson River. During 1977, clupeid larvae were first collected on 27 April and subsequently occurred through July (Figure 4-1, Appendix Table A-5). Clupeid post-yolk-sac larvae reached maximum densities from 2 to 7 June. Clupeid larvae collected ranged from 5 to 49 mm in length. Larvae from 6 to 8.9 mm constituted 48.8 percent of the clupeids collected at the discharge during this period (Table 4-10, Figure 4-2). Clupeid larvae exhibited a diel distribution characterized by minimal densities during the day from 0600 to 2100 hours (Figure 4-7, Table 4-11). Larval abundance progressively increased to peak densities between 0300 and 0600 hours; densities decreased rapidly each day following this peak.

TABLE 4-6 LENGTH-FREQUENCY DISTRIBUTION OF STRIPED BASS AND WEEKLY MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS IN COLLECTIONS AT THE BOWLINE POINT DISCHARGE DURING 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
17 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
3 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
10 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
7 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 MAY	1	5.0	0.0	0	1	0	0	0	0	0	0	0	5.0	5.0	5.0
26 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN	11	6.3	0.6	0	1	10	0	0	0	0	0	0	5.0	6.0	7.0
8 JUN	189	7.2	1.6	0	10	155	21	2	1	0	0	0	5.0	7.0	17.0
16 JUN	24	10.2	3.7	0	0	10	7	4	2	1	0	0	6.0	10.0	19.0
21 JUN	5	14.0	3.0	0	0	0	0	4	0	1	0	0	12.0	13.0	20.0
2 JUL	50	19.0	4.3	0	0	0	2	4	11	18	11	4	10.0	19.0	33.0
8 JUL	11	19.2	4.7	0	0	0	0	3	2	2	0	4	14.0	19.0	25.0
13 JUL	1	38.0	0.0	0	0	0	0	0	0	0	0	1	38.0	38.0	38.0
21 JUL	1	33.0	0.0	0	0	0	0	0	0	0	0	1	33.0	33.0	33.0
29 JUL	1	42.0	0.0	0	0	0	0	0	0	0	0	1	42.0	42.0	42.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 AUG	1	56.0	0.0	0	0	0	0	0	0	0	0	1	56.0	56.0	56.0
24 AUG	1	52.0	0.0	0	0	0	0	0	0	0	0	1	52.0	52.0	52.0
31 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

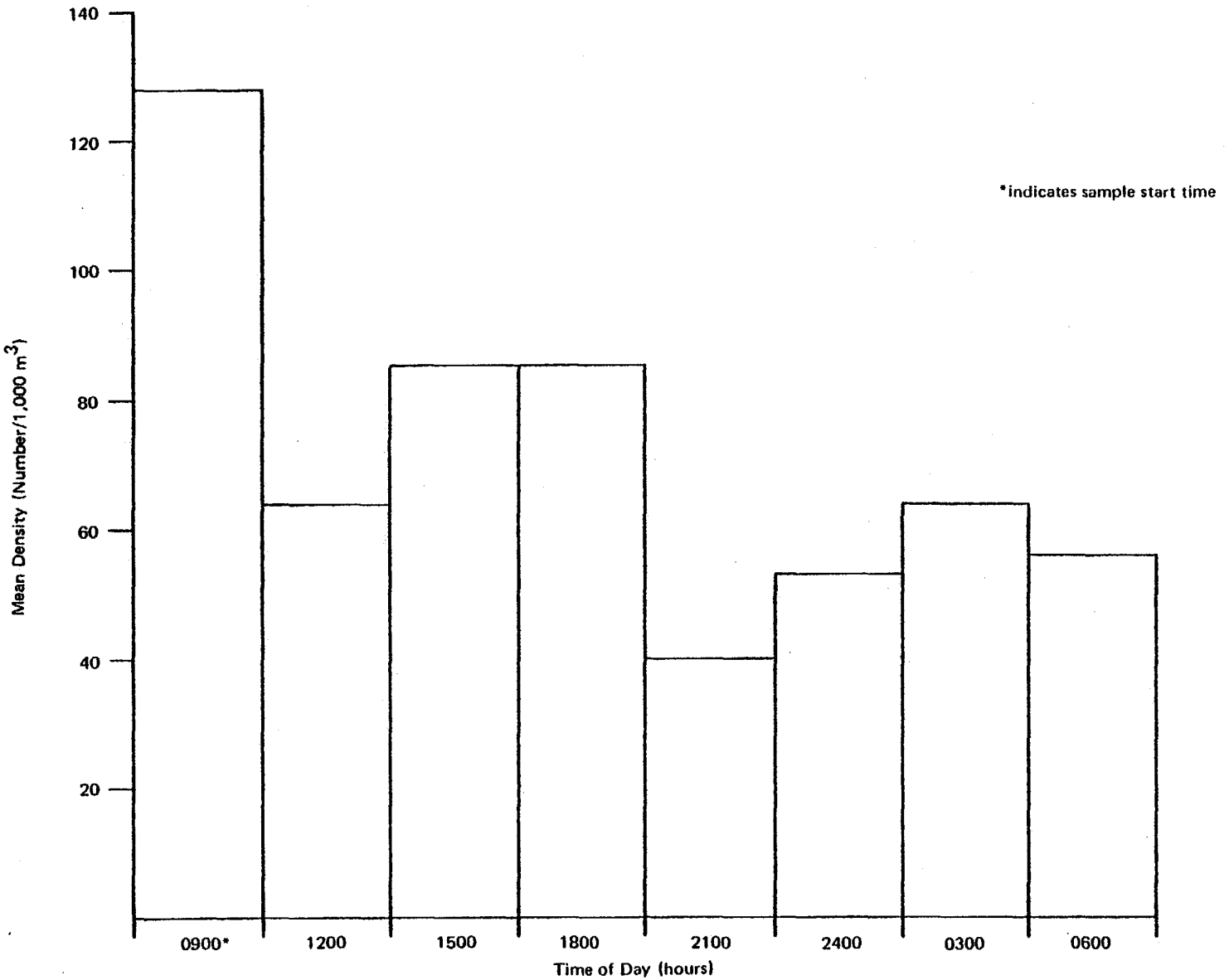


Figure 4-5. Diel distribution of striped bass post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.

TABLE 4-7 DIEL DISTRIBUTION OF STRIPED BASS LARVAE IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

	Number/1,000 m^3							
Date	0900[a]	1200	1500	1800	2100	2400	0300	0600
6 JUN	767.9	304.9	482.6	398.0	123.0	239.8	295.9	159.9
13 JUN	0.0	0.0	17.2	30.9	59.3	32.5	75.6	85.2
20 JUN	0.0	--[b]	10.5	--[b]	0.0	14.8	14.2	15.7
28 JUN	0.0	16.4	0.0	0.0	--[c]	17.7	0.0	15.7
5 JUL	0.0	0.0	0.0	0.0	15.6	15.8	0.0	0.0
11 JUL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	128.0	64.3	85.1	85.8	39.6	53.4	64.3	46.1

(a) Sample start time.
(b) Sample void in order to assure comparability of sample periods when actual and scheduled start time differed by more than 30 minutes.
(c) Sample void due to spillage.

TABLE 4-8 LENGTH-FREQUENCY DISTRIBUTION OF WHITE PERCH AND WEEKLY MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
17 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
3 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
10 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
7 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
26 MAY	3	4.0	0.0	0	3	0	0	0	0	0	0	0	4.0	4.0	4.0
2 JUN	5	5.2	1.2	0	3	2	0	0	0	0	0	0	4.0	5.0	7.0
8 JUN	42	6.5	2.1	0	14	21	6	1	0	0	0	0	3.0	6.0	12.0
16 JUN	3	10.3	0.9	0	0	0	3	0	0	0	0	0	9.0	11.0	11.0
21 JUN	7	5.4	3.1	0	6	0	0	1	0	0	0	0	4.0	4.0	13.0
2 JUL	19	14.2	4.1	0	2	0	2	4	8	3	0	0	4.0	15.0	20.0
8 JUL	6	15.8	4.3	0	0	0	0	2	3	0	0	1	12.0	15.0	25.0
13 JUL	1	17.0	0.0	0	0	0	0	0	1	0	0	0	17.0	17.0	17.0
21 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
29 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

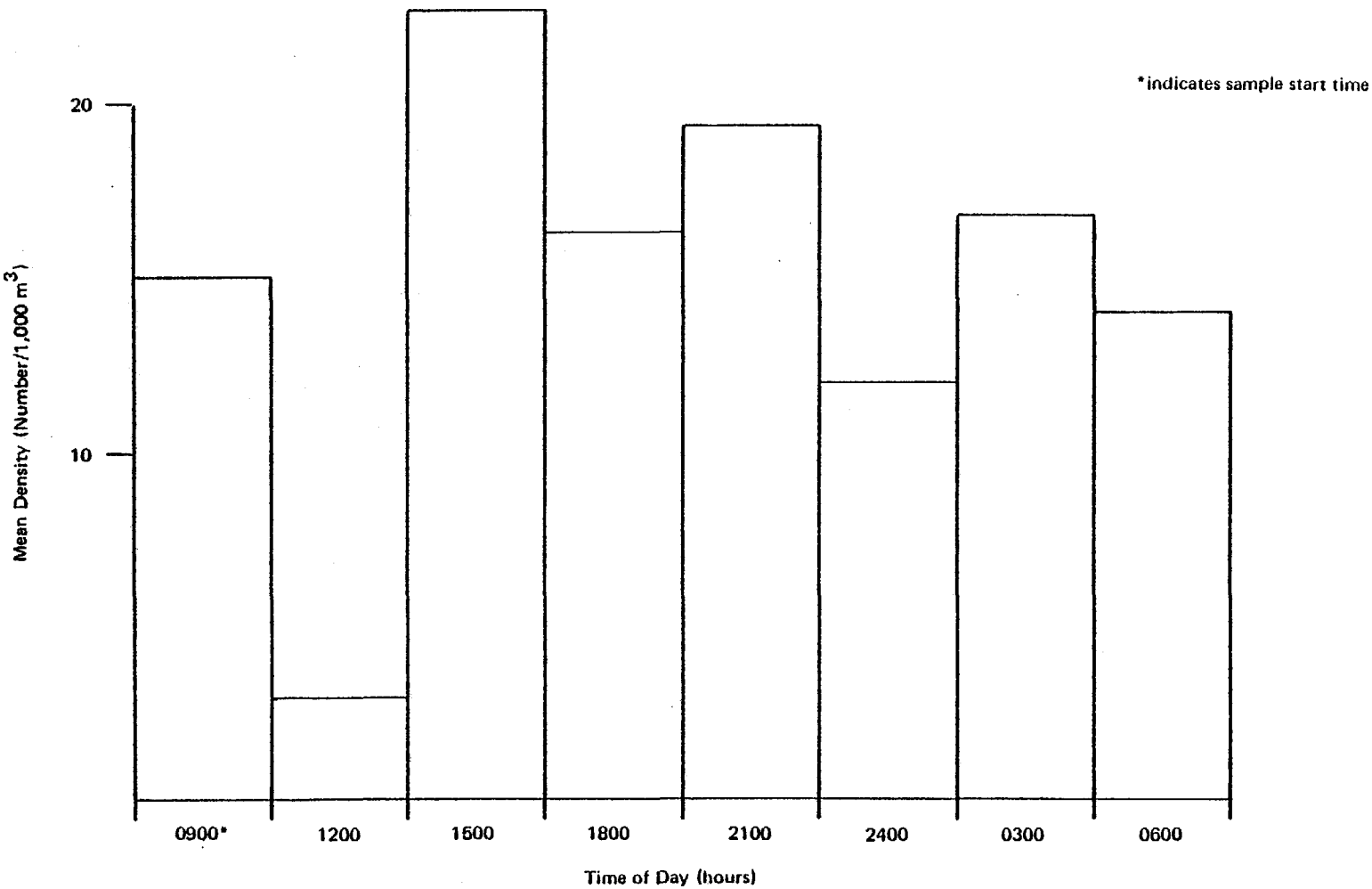


Figure 4-6. Diel distribution of white perch post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.

TABLE 4-9 DIEL DISTRIBUTION OF WHITE PERCH LARVAE IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

	Number/1,000 m^3							
Date	0900[a]	1200	1500	1800	2100	2400	0300	0600
6 JUN	71.4	15.2	120.6	66.3	52.7	42.3	29.6	53.3
13 JUN	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0
20 JUN	18.4	--[b]	0.0	--[b]	13.4	29.7	0.0	15.7
28 JUN	0.0	0.0	15.9	0.0	--[c]	0.0	70.5	15.7
5 JUL	0.0	0.0	0.0	15.3	0.0	0.0	0.0	0.0
11 JUL	0.0	0.0	0.0	0.0	15.8	0.0	0.0	0.0
Average	15.0	3.0	22.8	16.3	19.3	12.0	16.7	14.1

(a) Sample start time.
(b) Sample void in order to assure comparability of samples when actual and scheduled start time differed by more than 30 minutes.
(c) Sample void due to spillage.

TABLE 4-10 LENGTH-FREQUENCY DISTRIBUTION OF CLUPEIDS AND WEEKLY MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
17 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 FEB	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
3 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
10 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 MAR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
7 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
28 APR	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
26 MAY	4	7.0	2.3	0	1	2	1	0	0	0	0	0	5.0	6.0	11.0
2 JUN	7	8.9	1.6	0	0	3	4	0	0	0	0	0	6.0	9.0	11.0
8 JUN	20	9.3	3.2	0	1	11	2	4	2	0	0	0	5.0	8.0	15.0
16 JUN	4	6.2	0.4	0	0	4	0	0	0	0	0	0	6.0	6.0	7.0
21 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
8 JUL	1	13.0	0.0	0	0	0	0	1	0	0	0	0	13.0	13.0	13.0
13 JUL	3	38.7	3.1	0	0	0	0	0	0	0	0	3	36.0	37.0	43.0
21 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
29 JUL	2	48.5	0.5	0	0	0	0	0	0	0	0	2	48.0	48.5	49.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
19 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
31 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

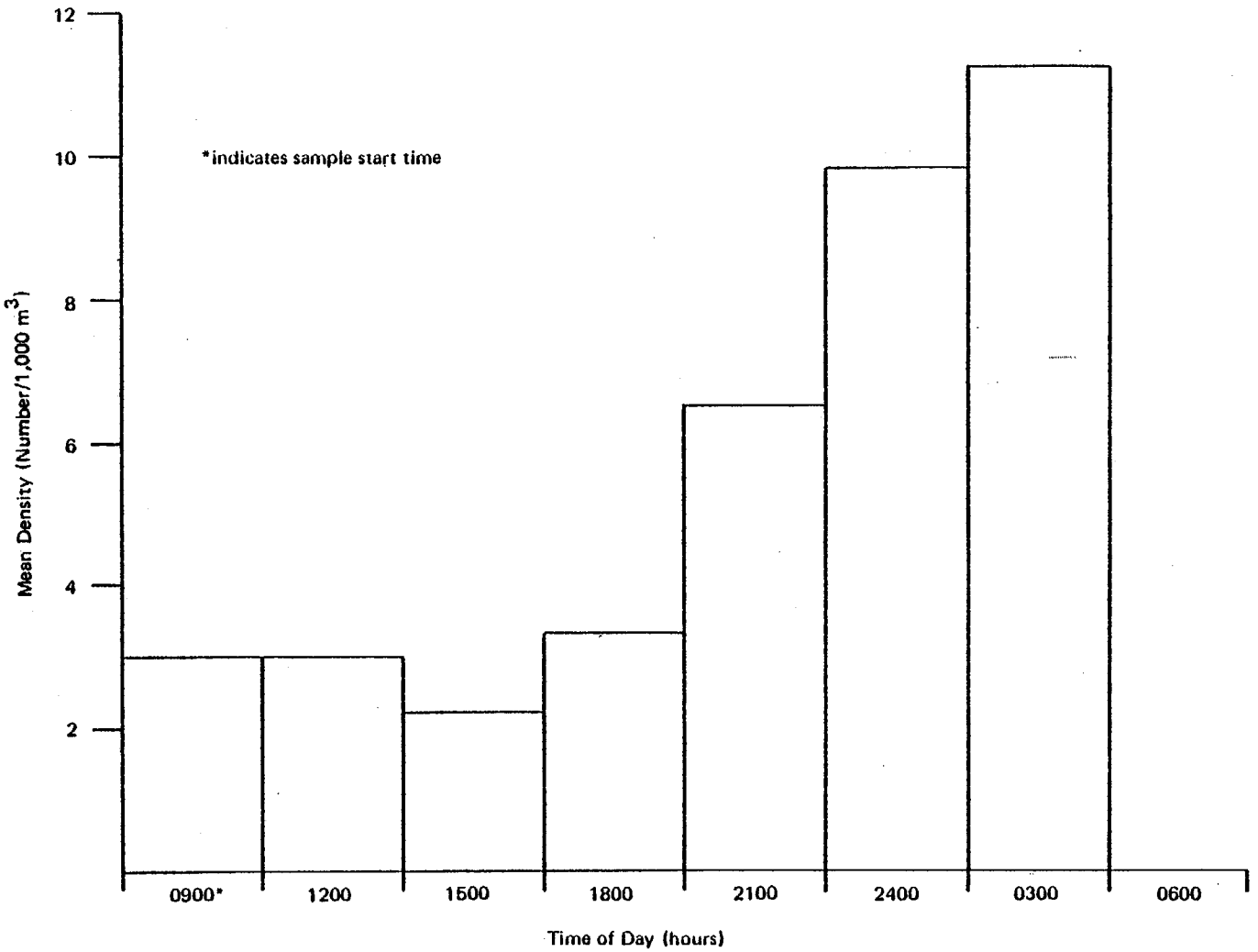


Figure 4-7. Diel distribution of clupeid post-yolk-sac larvae collected at the Bowline Point plant discharge, 6 June - 11 July 1977.

TABLE 4-11 DIEL DISTRIBUTION OF CLUPEID LARVAE IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

	Number/1,000 m^3							
Date	0900[a]	1200	1500	1800	2100	2400	0300	0600
6 JUN	17.0	15.2	13.4	16.6	17.6	42.3	29.6	0.0
13 JUN	0.0	0.0	0.0	0.0	14.8	16.3	37.8	0.0
20 JUN	0.0	--[b]	0.0	--[b]	0.0	0.0	0.0	0.0
28 JUN	0.0	0.0	0.0	0.0	--[c]	0.0	0.0	0.0
5 JUL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 JUL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	3.0	3.0	2.2	3.3	6.5	9.8	11.2	0.0

(a) Sample start time.
(b) Sample void in order to assure comparability of sample periods when actual and scheduled start time differed by more than 30 minutes.
(c) Sample void due to spillage.

4.2 SPECIES COMPOSITION AND ABUNDANCE--INTAKE SAMPLING

Entrainment abundance and species composition were determined from 30-minute net samples collected at the surface, middle, and bottom depths at the Bowline Point plant intake. Samples were collected once per week through the entrainment season and twice per week during peak Morone spp. occurrence. Atlantic tomcod yolk-sac larvae accounted for 39.4 percent of all ichthyoplankton collected (Table 4-12). The next four most abundant species were bay anchovy, striped bass, white perch, and clupeids.

4.2.1 Selected Species

4.2.1.1 Atlantic Tomcod

Atlantic tomcod were collected from 8 to 29 March. The period of maximum abundance of yolk-sac larvae (densities exceeded 1,250 larvae/1,000 m^3) occurred on 15 March (Figure 4-8, Appendix Table B-1). Atlantic tomcod post-yolk-sac larvae reached maximum abundance on 29 March.

Samples were collected at the surface, middle, and bottom depths to determine the vertical stratification of ichthyoplankton present in the intake water column. Yolk-sac larvae and post-yolk-sac larvae were more abundant at the middle and bottom depths than at the surface (Table 4-13). The proportion of post-yolk-sac larvae collected at the bottom depth was greater than the proportion of yolk-sac larvae collected at that depth (0.67 and 0.48, respectively). This shift may reflect the progressive increase in preference for bottom strata with age by Atlantic tomcod larvae.

4.2.1.2 Bay Anchovy

Bay anchovy larvae were collected from 6 June to 12 July. Larval abundance gradually increased throughout the sampling season with peak densities of 249/1,000 m^3 observed on the last sample date, 12 July (Figure 4-8, Appendix Table B-2). This corresponds to the peak period of abundance indicated by discharge sampling. Larvae were more abundant at the bottom than at the surface or middle depths (Table 4-13).

4.2.1.3 Striped Bass

Striped bass were collected from 31 May to 5 July. Yolk-sac larvae and post-yolk-sac larvae reached peak densities on 2 June (71/1,000 m^3 and 140/1,000 m^3, respectively), and densities remained high through 8 June (Figure 4-8), Appendix Table B-3). All larvae, juveniles, and 96 percent of yolk-sac larvae collected were obtained from middle and bottom net samples (Table 4-13).

4.2.1.4 White Perch

White perch were collected from 31 May to 5 July. Maximum larval occurrence was observed on 6 June (Figure 4-8, Appendix Table B-4). Peak abundance at the intake occurred during the same period as at the discharge. The majority of the larvae collected were from the middle and bottom depths (Table 4-13).

TABLE 4-12 NUMBER AND PERCENT COMPOSITION BY LIFE STAGE OF ICHTHYOPLANKTON COLLECTED BY NETS DURING ABUNDANCE SAMPLING AT THE BOWLINE POINT PLANT INTAKE, 1977

Composite of Three Depths

Species	Life Stage[a]	Number Collected	Percent Composition
Atlantic tomcod	YSL	590	39.4
Bay anchovy	LAR	467	31.2
Striped bass	LAR	170	11.3
White perch	LAR	73	4.9
Striped bass	YSL	60	4.0
Clupeids	LAR	55	3.7
Atlantic tomcod	LAR	52	3.5
Silversides	LAR	13	0.9
Sunfishes	LAR	4	0.3
Bluefish	JUV	3	0.2
Unidentified*	LAR	2	0.1
Rainbow smelt	LAR	2	0.1
Hogchoker	LAR	2	0.1
White perch	YSL	1	0.1
Clupeids	EGG	1	0.1
Unidentified*	YSL	1	0.1
Minnows	LAR	1	0.1
Striped bass	JUV	1	0.1

(a) EGG = Egg; LAR = Larvae; YSL = Yolk-sac larvae; JUV = Juvenile.

Note: * indicates organisms damaged.

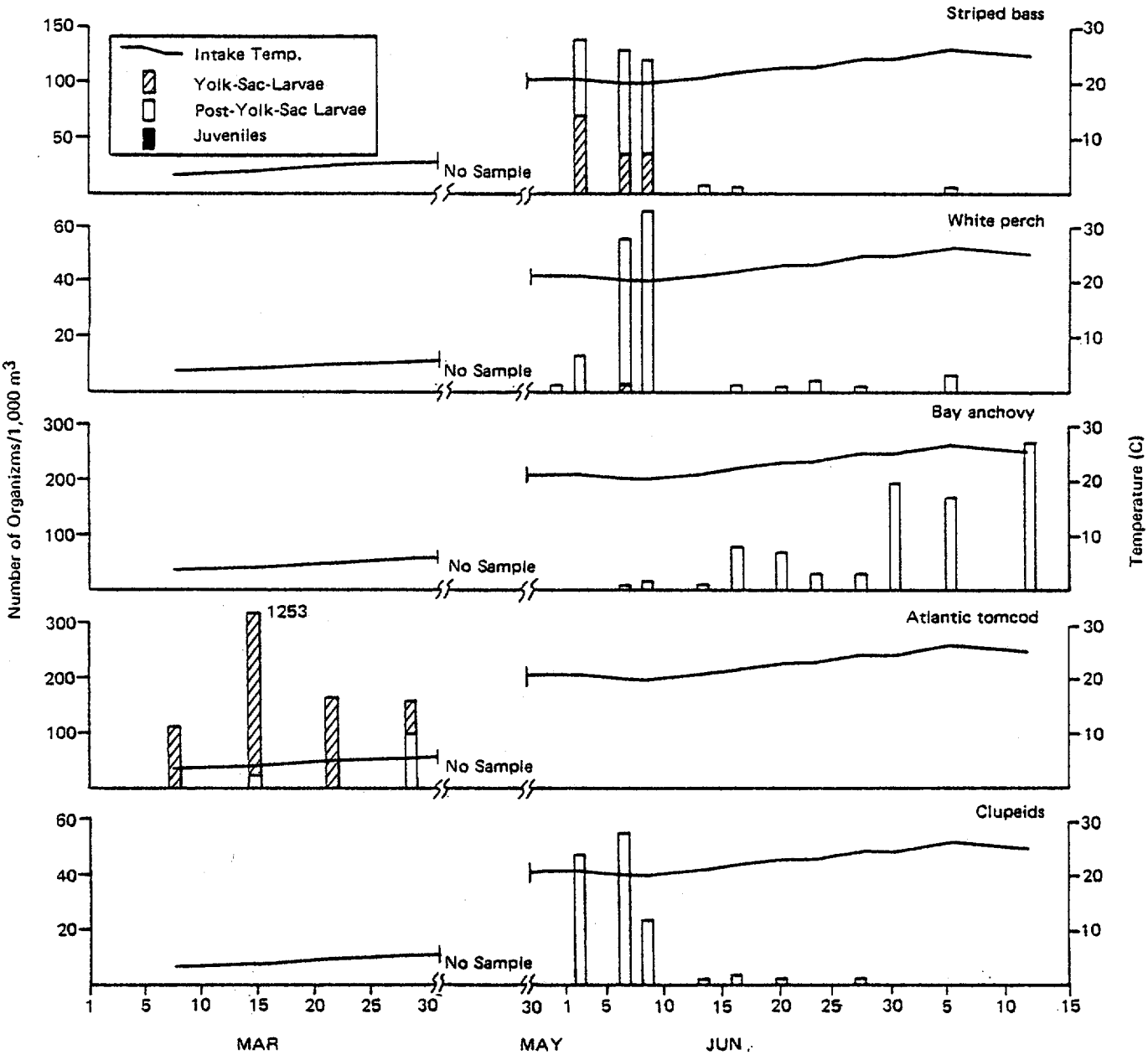


Figure 4-8. Daily densities of fish larvae and juveniles collected at the Bowline Point plant intake during 1977.

TABLE 4-13 RELATIVE PROPORTIONS OF SELECTED SPECIES AND LIFE STAGES OF ICHTHYOPLANKTON COLLECTED FROM VARIOUS DEPTHS AT THE BOWLINE POINT PLANT INTAKE, 1977

Date	Depth	Eggs	Yolk-Sac Larvae	Post-Yolk-Sac Larvae	Juveniles
			Striped Bass		
31 MAY - 5 JUL	Surface	0.00	0.04	0.00	0.00
	Middle	0.00	0.46	0.50	0.00
	Bottom	0.00	0.50	0.50	1.00
			White Perch		
31 MAY - 5 JUL	Surface	0.00	0.00	0.03	0.00
	Middle	0.00	0.00	0.47	0.00
	Bottom	0.00	0.00	0.50	0.00
			Atlantic Tomcod		
8 MAR - 29 MAR	Surface	0.00	0.15	0.10	0.00
	Middle	0.00	0.37	0.23	0.00
	Bottom	0.00	0.48	0.67	0.00
			Clupeids		
2 JUN - 27 JUN	Surface	0.00	0.00	0.22	0.00
	Middle	0.00	0.00	0.40	0.00
	Bottom	1.00	0.00	0.38	0.00
			Bay Anchovy		
6 JUN - 12 JUL	Surface	0.00	0.00	0.20	0.00
	Middle	0.00	0.00	0.35	0.00
	Bottom	0.00	0.00	0.45	0.00

4.2.1.5 Clupeids

Clupeids were present in abundance collections from 2 to 27 June. Maximum larval density was observed on 6 June (Figure 4-8, Appendix Table B-5). Peak abundance occurred during the same period at both intake and discharge. Larval abundance was greatest at the middle depth followed by the bottom and surface depths (Table 4-13).

REFERENCES

Bath, D. 1974. New York University egg and larval seminar. Unpublished.

Bayless, J. D. 1972. Artificial propogation and hybridization of striped bass, Morone saxatilis (Walbaum). South Carolina Wildlife Resources Dept.

Bigelow, H. B. and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. U.S. Fish and Wildlife Serv. Fish. Bull. 74.

Booth, R. A. 1967. A description of the larval stages of the tomcod, Microgadus tomcod, with comments on its spawning ecology. Ph.D. Thesis, Univ. Connecticut.

Chambers, J. R., J. A. Musick and J. Davis. 1976. Methods of distinguishing larval alewife from larval blueback herring. Chesapeak Sci. 17:93-100.

Cianci, J. M. 1969. Larval development of the alewife, Alosa pseudoharengus Wilson and the glut herring Alosa aestivalis Mitchell, M.S. Thesis, Univ. of Conn.

Doroshev, S. I. 1970. Biological features of the eggs, larval, and young of the striped bass (Roccus saxatilis Walbaum) in connection with the problem of its acclimatization in the USSR. J. Ichthiology 10:236-247.

Dovel, W. L. and J. R. Edmunds. 1971. Recent changes in striped bass spawning sites and commercial fishing areas in Upper Chesapeake Bay; possible influencing factors. Chesapeake Sci. 12:33-39.

Ecological Analysts, Inc. 1976. Bowline Point Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretive Report.

Ecological Analysts, Inc. 1977. Bowline Point Generating Station Entrainment Survival and Abundance Studies. 1976 Annual Interpretive Report.

Hildebrand, S. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. Bull. U.S. Bur. Fish. 43.

Krester, W. A. 1968. Aspects of striped bass larvae Morone saxatilis captured in the Hudson River near Cornwall, N.Y. April-August 1968. Consolidated Edison Company of New York, Inc.

Leim, A. H. 1924. The life history of the shad (Alosa sapidissima) with special reference to the factors limiting its abundance. Contrib. Canadian Biol. 2(11):161-284.

Lippson, A. J. and R. L. Moran. 1974. Manual for Identification of early developmental stages of fishes of the Potomac River Estuary. Env. Tech. Center Martin Marietta Corp.

Mansuetti, A. J. and J. D. Hardy, Jr. 1967. Development of fishes of the Chesapeake Bay region; an atlas of egg, larval, and juvenile stages. Natural Res. Inst., Univ. of Maryland. 202 pp.

Orange and Rockland Utilities, Inc. 1978. Bowline Point Generating Station 316(a) Demonstration.

Rathjen, W. F. and L. C. Miller. 1957. Aspects of the early life history of the striped bass (Roccus saxatilis) in the Hudson River. N.Y. Fish and Game J. 4:43-60.

Scotton, L. N., R. E. Smith, N. S. Smith, K. S. Price, and D. P. de Sylva. 1973. Pictorial guide to fish larvae of Delaware Bay with information and bibliographies useful for the study of fish larvae. College Marine Studies, Univ. Delaware, Delaware Bay Rpt. Ser. 7. 206 pp.

Wang, J. C. S., and R. J. Kernehan. In press. Fishes of the Delaware Estuaries: A Guide to Early Life Histories. EA Communications.

APPENDIX A

BOWLINE POINT PUMPED ENTRAINMENT ABUNDANCE DISCHARGE

TABLE A-1 VOLUME WEIGHTED AVERAGE DENSITY OF BAY ANCHOVY IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/03/77	0.6	1960.	64.2	0.0	0.0	0.0	0.0	0.0
02/04/77	0.4	1930.	48.0	0.0	0.0	0.0	0.0	0.0
02/08/77	0.9	2080.	67.8	0.0	0.0	0.0	0.0	0.0
02/09/77	1.6	2130.	66.1	0.0	0.0	0.0	0.0	0.0
02/10/77	1.8	2020.	49.8	0.0	0.0	0.0	0.0	0.0
02/11/77	1.7	2155.	57.5	0.0	0.0	0.0	0.0	0.0
02/14/77	2.3	2860.	54.0	0.0	0.0	0.0	0.0	0.0
02/15/77	2.0	2650.	531.8	0.0	0.0	0.0	0.0	0.0
02/16/77	1.9	2360.	530.6	0.0	0.0	0.0	0.0	0.0
02/17/77	2.0	2125.	531.6	0.0	0.0	0.0	0.0	0.0
02/22/77	2.8	1600.	519.1	0.0	0.0	0.0	0.0	0.0
02/23/77	2.6	1520.	333.1	0.0	0.0	0.0	0.0	0.0
02/24/77	2.4	1090.	346.4	0.0	0.0	0.0	0.0	0.0
02/28/77	3.2	1650.	370.4	0.0	0.0	0.0	0.0	0.0
03/01/77	3.0	1800.	529.7	0.0	0.0	0.0	0.0	0.0
03/02/77	4.0	2000.	335.3	0.0	0.0	0.0	0.0	0.0
03/03/77	4.0	2000.	324.3	0.0	0.0	0.0	0.0	0.0
03/06/77	4.0	750.	511.9	0.0	0.0	0.0	0.0	0.0
03/07/77	4.0	750.	502.1	0.0	0.0	0.0	0.0	0.0
03/08/77	3.7	203.	510.0	0.0	0.0	0.0	0.0	0.0
03/09/77	5.0	160.	531.1	0.0	0.0	0.0	0.0	0.0
03/10/77	4.6	140.	511.4	0.0	0.0	0.0	0.0	0.0
03/13/77	4.5	145.	519.9	0.0	0.0	0.0	0.0	0.0
03/14/77	4.4	126.	526.2	0.0	0.0	0.0	0.0	0.0
03/15/77	4.9	140.	524.7	0.0	0.0	0.0	0.0	0.0
03/16/77	5.5	130.	530.9	0.0	0.0	0.0	0.0	0.0
03/17/77	4.7	120.	542.3	0.0	0.0	0.0	0.0	0.0
03/20/77	5.4	110.	490.2	0.0	0.0	0.0	0.0	0.0
03/21/77	5.2	108.	543.1	0.0	0.0	0.0	0.0	0.0
03/22/77	4.6	100.	521.5	0.0	0.0	0.0	0.0	0.0
03/23/77	4.5	105.	545.4	0.0	0.0	0.0	0.0	0.0
03/28/77	6.8	570.	560.6	0.0	0.0	0.0	0.0	0.0
03/29/77	9.0	850.	510.6	0.0	0.0	0.0	0.0	0.0
03/30/77	6.2	610.	537.2	0.0	0.0	0.0	0.0	0.0
03/31/77	6.3	620.	577.3	0.0	0.0	0.0	0.0	0.0

TABLE A-1 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/04/77	8.0	140.	564.7	0.0	0.0	0.0	0.0	0.0
04/05/77	7.7	140.	565.6	0.0	0.0	0.0	0.0	0.0
04/06/77	8.7	145.	499.9	0.0	0.0	0.0	0.0	0.0
04/07/77	7.8	135.	552.9	0.0	0.0	0.0	0.0	0.0
04/11/77	8.9	120.	552.9	0.0	0.0	0.0	0.0	0.0
04/12/77	9.5	120.	451.5	0.0	0.0	0.0	0.0	0.0
04/13/77	9.9	120.	557.9	0.0	0.0	0.0	0.0	0.0
04/14/77	9.1	115.	503.8	0.0	0.0	0.0	0.0	0.0
04/18/77	11.8	130.	486.1	0.0	0.0	0.0	0.0	0.0
04/19/77	11.6	120.	515.8	0.0	0.0	0.0	0.0	0.0
04/20/77	13.3	130.	516.4	0.0	0.0	0.0	0.0	0.0
04/21/77	15.5	130.	501.6	0.0	0.0	0.0	0.0	0.0
04/25/77	13.0	110.	533.5	0.0	0.0	0.0	0.0	0.0
04/26/77	11.5	125.	539.9	0.0	0.0	0.0	0.0	0.0
04/27/77	12.4	135.	531.0	0.0	0.0	0.0	0.0	0.0
04/28/77	12.3	130.	512.9	0.0	0.0	0.0	0.0	0.0
05/02/77	14.4	130.	474.6	0.0	0.0	0.0	0.0	0.0
05/12/77	15.2	135.	517.8	0.0	0.0	0.0	0.0	0.0
05/16/77	16.2	130.	526.0	0.0	0.0	0.0	0.0	0.0
05/17/77	16.5	140.	536.8	0.0	0.0	0.0	0.0	0.0
05/18/77	17.1	180.	540.0	0.0	0.0	0.0	0.0	0.0
05/19/77	17.2	160.	517.4	0.0	0.0	0.0	0.0	0.0
05/22/77	19.5	150.	519.3	0.0	0.0	0.0	0.0	0.0
05/23/77	20.6	205.	1069.3	0.0	0.0	0.0	0.0	0.0
05/26/77	20.8	250.	523.1	0.0	0.0	0.0	0.0	0.0
05/31/77	20.4	4690.	586.7	0.0	0.0	0.0	0.0	0.0
06/01/77	20.8	4770.	511.6	0.0	0.0	0.0	0.0	0.0
06/02/77	20.5	4190.	501.8	0.0	0.0	0.0	0.0	0.0
06/05/77	20.2	4000.	506.0	0.0	0.0	0.0	0.0	0.0
06/06/77	20.1	4028.	508.2	0.0	0.0	0.0	0.0	0.0
06/07/77	19.9	4010.	496.1	0.0	0.0	0.0	0.0	0.0
06/08/77	21.3	4400.	579.8	0.0	0.0	0.0	0.0	0.0
06/12/77	21.3	4400.	465.5	0.0	0.0	0.0	0.0	0.0
06/13/77	21.0	4842.	977.6	2.0	0.0	22.5	0.0	22.5
06/16/77	21.7	6100.	470.6	0.0	0.0	59.5	0.0	59.5

TABLE A-1 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES-C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/20/77	22.8	6077.	458.8	0.0	0.0	48.0	0.0	48.0
06/26/77	24.6	5659.	1527.5	0.0	0.0	245.5	0.0	245.5
06/29/77	25.0	6500.	571.6	0.0	0.0	334.1	0.0	334.1
06/30/77	25.0	5950.	592.3	0.0	0.0	439.0	0.0	439.0
07/01/77	25.0	5950.	560.9	0.0	0.0	474.2	0.0	474.2
07/02/77	****	******	427.2	0.0	0.0	416.7	0.0	416.7
07/03/77	****	******	468.0	0.0	0.0	399.6	0.0	399.6
07/04/77	****	******	527.4	0.0	0.0	477.8	0.0	477.8
07/05/77	27.0	4770.	533.9	0.0	0.0	389.6	0.0	389.6
07/06/77	25.0	4350.	543.6	0.0	0.0	316.4	0.0	316.4
07/07/77	25.1	4450.	500.4	0.0	0.0	339.7	0.0	339.7
07/08/77	25.4	4350.	506.7	0.0	0.0	402.6	0.0	402.6
07/11/77	24.2	5203.	500.7	0.0	0.0	629.1	0.0	629.1
07/12/77	25.4	5940.	560.6	0.0	0.0	397.8	0.0	397.8
07/13/77	26.0	5940.	542.6	0.0	0.0	287.5	0.0	287.5
07/17/77	26.1	7300.	775.2	0.0	0.0	825.6	2.6	828.2
07/18/77	27.1	6880.	769.2	0.0	0.0	703.3	0.0	703.3
07/19/77	27.2	7490.	567.8	0.0	0.0	116.2	0.0	116.2
07/20/77	27.7	7700.	559.8	0.0	0.0	1793.5	1.8	1795.3
07/21/77	27.7	7700.	586.5	0.0	0.0	1607.8	0.0	1607.8
07/25/77	27.5	6425.	1059.8	0.0	0.0	890.7	0.0	890.7
07/29/77	27.8	6670.	584.8	0.0	0.0	531.8	3.4	535.2
08/01/77	28.0	6350.	606.4	0.0	0.0	890.5	3.3	893.8
08/02/77	26.9	5640.	588.1	0.0	0.0	1011.7	23.8	1035.5
08/03/77	27.8	5790.	573.1	0.0	0.0	668.3	5.2	673.5
08/04/77	27.8	5790.	569.4	0.0	0.0	693.7	15.8	709.5
08/08/77	28.4	5670.	587.1	0.0	0.0	1045.8	44.3	1090.1
08/09/77	27.8	5580.	592.5	0.0	0.0	813.5	33.8	847.3
08/10/77	27.8	5580.	560.5	0.0	0.0	744.0	30.3	774.3
08/11/77	****	******	548.9	0.0	0.0	716.0	20.0	736.0
08/15/77	26.0	******	586.3	0.0	0.0	670.3	11.9	682.2
08/16/77	26.0	******	593.3	6.7	0.0	534.3	47.2	581.5
08/17/77	27.7	7080.	584.1	34.2	0.0	462.2	36.0	498.2
08/18/77	27.5	6450.	577.3	6.9	0.0	405.3	52.0	457.3
08/19/77	27.7	7300.	525.0	0.0	0.0	461.0	1.9	462.9

* Data not collected.

TABLE A-1 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/23/77	26.3	5950.	490.1	0.0	0.0	489.7	22.4	512.1
08/24/77	25.8	6080.	493.0	0.0	0.0	237.3	44.6	281.9
08/29/77	28.1	5550.	495.9	0.0	0.0	66.5	26.2	92.8
08/30/77	27.3	5300.	536.5	0.0	0.0	41.0	18.6	59.6
08/31/77	27.3	5300.	598.8	0.0	0.0	31.7	13.4	45.1

TABLE A-2 VOLUME WEIGHTED AVERAGE DENSITY OF ATLANTIC TOMCOD IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/03/77	0.6	1960.	64.2	0.0	0.0	0.0	0.0	0.0
02/04/77	0.4	1930.	48.0	0.0	0.0	0.0	0.0	0.0
02/08/77	0.9	2080.	67.8	0.0	0.0	0.0	0.0	0.0
02/09/77	1.6	2130.	66.1	0.0	0.0	0.0	0.0	0.0
02/10/77	1.8	2020.	49.8	0.0	0.0	0.0	0.0	0.0
02/11/77	1.7	2155.	57.5	0.0	0.0	0.0	0.0	0.0
02/14/77	2.3	2860.	54.0	0.0	0.0	0.0	0.0	0.0
02/15/77	2.0	2650.	531.8	0.0	0.0	0.0	0.0	0.0
02/16/77	1.9	2360.	530.6	0.0	1.9	0.0	0.0	1.9
02/17/77	2.0	2125.	531.6	0.0	1.9	0.0	0.0	1.9
02/22/77	2.8	1600.	519.1	0.0	7.7	0.0	0.0	7.7
02/23/77	2.6	1520.	333.1	0.0	0.0	6.0	0.0	6.0
02/24/77	2.4	1090.	346.4	0.0	14.4	2.9	0.0	17.3
02/28/77	3.2	1650.	370.4	0.0	40.5	0.0	0.0	40.5
03/01/77	3.0	1800.	529.7	0.0	66.1	1.9	0.0	68.0
03/02/77	4.0	2000.	335.3	0.0	80.5	8.9	0.0	89.5
03/03/77	4.0	2000.	324.3	0.0	37.0	0.0	0.0	37.0
03/06/77	4.0	750.	511.9	0.0	33.2	2.0	0.0	35.2
03/07/77	4.0	750.	502.1	0.0	15.9	0.0	0.0	15.9
03/08/77	3.7	203.	510.0	0.0	115.7	2.0	0.0	117.6
03/09/77	5.0	160.	531.1	0.0	128.0	3.8	0.0	131.8
03/10/77	4.6	140.	511.4	0.0	246.4	3.9	0.0	250.3
03/13/77	4.5	145.	519.9	0.0	761.7	5.8	0.0	767.5
03/14/77	4.4	126.	526.2	0.0	1056.6	1.9	0.0	1058.5
03/15/77	4.9	140.	524.7	0.0	575.6	5.7	0.0	581.3
03/16/77	5.5	130.	530.9	0.0	237.3	1.9	0.0	239.2
03/17/77	4.7	120.	542.3	0.0	136.5	0.0	0.0	136.5
03/20/77	5.4	110.	490.2	0.0	71.4	0.0	0.0	71.4
03/21/77	5.2	108.	543.1	0.0	147.3	3.7	0.0	151.0
03/22/77	4.6	100.	521.5	1.9	49.9	5.8	0.0	55.6
03/23/77	4.5	105.	545.4	0.0	66.0	0.0	0.0	66.0
03/28/77	6.8	570.	560.6	0.0	7.1	33.9	0.0	41.0
03/29/77	9.0	850.	510.6	0.0	25.5	0.0	0.0	25.5
03/30/77	6.2	610.	537.2	0.0	188.0	16.8	0.0	204.8
03/31/77	6.3	620.	577.3	0.0	405.3	27.7	0.0	433.1

TABLE A-2 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/04/77	8.0	140.	564.7	0.0	1.8	0.0	0.0	1.8
04/05/77	7.7	140.	565.6	0.0	5.3	0.0	0.0	5.3
04/06/77	8.7	145.	499.9	0.0	2.0	0.0	0.0	2.0
04/07/77	7.8	135.	552.9	0.0	0.0	0.0	0.0	0.0
04/11/77	8.9	120.	552.9	0.0	0.0	0.0	0.0	0.0
04/12/77	9.5	120.	451.5	0.0	0.0	0.0	0.0	0.0
04/13/77	9.9	120.	557.9	0.0	0.0	0.0	0.0	0.0
04/14/77	9.1	115.	503.8	0.0	0.0	0.0	0.0	0.0
04/18/77	11.8	130.	486.1	0.0	0.0	0.0	0.0	0.0
04/19/77	11.6	120.	515.8	0.0	0.0	0.0	0.0	0.0
04/20/77	13.3	130.	516.4	0.0	0.0	0.0	0.0	0.0
04/21/77	15.5	130.	501.6	0.0	0.0	0.0	0.0	0.0
04/25/77	13.0	110.	533.5	0.0	0.0	0.0	0.0	0.0
04/26/77	11.5	125.	539.9	0.0	0.0	0.0	0.0	0.0
04/27/77	12.4	135.	531.0	0.0	0.0	0.0	0.0	0.0
04/28/77	12.3	130.	512.9	0.0	0.0	0.0	0.0	0.0
05/02/77	14.4	130.	474.6	0.0	0.0	0.0	0.0	0.0
05/12/77	15.2	135.	517.8	0.0	0.0	0.0	0.0	0.0
05/16/77	16.2	130.	526.0	0.0	0.0	0.0	0.0	0.0
05/17/77	16.5	140.	536.8	0.0	0.0	0.0	1.9	1.9
05/18/77	17.1	180.	540.0	0.0	0.0	0.0	3.7	3.7
05/19/77	17.2	160.	517.4	0.0	0.0	0.0	0.0	0.0
05/22/77	19.5	150.	519.3	0.0	0.0	0.0	3.9	3.9
05/23/77	20.6	205.	1069.3	0.0	0.0	0.0	0.0	0.0
05/26/77	20.8	250.	523.1	0.0	0.0	0.0	3.8	3.8
05/31/77	20.1	4690.	586.7	0.0	0.0	0.0	0.0	0.0
06/01/77	20.8	4770.	511.6	0.0	0.0	0.0	0.0	0.0
06/02/77	20.5	4190.	501.8	0.0	0.0	0.0	2.0	2.0
06/05/77	20.2	4000.	506.0	0.0	0.0	0.0	2.0	2.0
06/06/77	20.1	4028.	508.2	0.0	0.0	0.0	0.0	0.0
06/07/77	19.9	4010.	496.1	0.0	0.0	0.0	0.0	0.0
06/08/77	21.3	4400.	579.8	0.0	0.0	0.0	0.0	0.0
06/12/77	21.3	4400.	465.5	0.0	0.0	0.0	0.0	0.0
06/13/77	21.0	4842.	977.6	0.0	0.0	0.0	1.0	1.0
06/16/77	21.7	6100.	470.6	0.0	0.0	0.0	0.0	0.0

TABLE A-2 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/20/77	22.8	6077.	458.8	0.0	0.0	0.0	0.0	0.0
06/26/77	24.6	5659.	1527.5	0.0	0.0	0.0	0.0	0.0
06/29/77	25.0	6500.	571.6	0.0	0.0	0.0	0.0	0.0
06/30/77	25.0	5950.	592.3	0.0	0.0	0.0	0.0	0.0
07/01/77	25.0	5950.	560.9	0.0	0.0	0.0	0.0	0.0
07/02/77	****	******	427.2	0.0	0.0	0.0	0.0	0.0
07/03/77	****	******	468.0	0.0	0.0	0.0	0.0	0.0
07/04/77	****	******	527.4	0.0	0.0	0.0	0.0	0.0
07/05/77	27.0	8770.	533.9	0.0	0.0	0.0	0.0	0.0
07/06/77	25.0	4350.	543.6	0.0	0.0	0.0	0.0	0.0
07/07/77	25.1	4450.	500.4	0.0	0.0	0.0	0.0	0.0
07/08/77	25.4	4350.	506.7	0.0	0.0	0.0	0.0	0.0
07/11/77	24.2	5203.	500.7	0.0	0.0	0.0	0.0	0.0
07/12/77	25.4	5940.	560.6	0.0	0.0	0.0	0.0	0.0
07/13/77	26.0	5940.	542.6	0.0	0.0	0.0	0.0	0.0
07/17/77	26.1	7300.	775.2	0.0	0.0	0.0	0.0	0.0
07/18/77	27.1	6880.	769.2	0.0	0.0	0.0	0.0	0.0
07/19/77	27.2	7490.	567.8	0.0	0.0	0.0	0.0	0.0
07/20/77	27.7	7700.	559.8	0.0	0.0	0.0	0.0	0.0
07/21/77	27.7	7700.	586.5	0.0	0.0	0.0	0.0	0.0
07/25/77	27.5	6425.	1059.8	0.0	0.0	0.0	0.0	0.0
07/29/77	27.8	6670.	584.8	0.0	0.0	0.0	0.0	0.0
08/01/77	28.0	6350.	606.4	0.0	0.0	0.0	0.0	0.0
08/02/77	26.9	5640.	588.1	0.0	0.0	0.0	0.0	0.0
08/03/77	27.8	5790.	573.1	0.0	0.0	0.0	0.0	0.0
08/04/77	27.8	5790.	569.4	0.0	0.0	0.0	0.0	0.0
08/08/77	28.4	5670.	587.1	0.0	0.0	0.0	0.0	0.0
08/09/77	27.8	5580.	592.5	0.0	0.0	0.0	0.0	0.0
08/10/77	27.8	5580.	560.5	0.0	0.0	0.0	0.0	0.0
08/11/77	****	******	548.9	0.0	0.0	0.0	0.0	0.0
08/15/77	26.0	******	586.3	0.0	0.0	0.0	0.0	0.0
08/16/77	26.0	******	593.3	0.0	0.0	0.0	0.0	0.0
08/17/77	27.7	7080.	584.1	0.0	0.0	0.0	0.0	0.0
08/18/77	27.5	6450.	577.3	0.0	0.0	0.0	0.0	0.0
08/19/77	27.7	7300.	525.0	0.0	0.0	0.0	0.0	0.0

* Data not collected.

TABLE A-2 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/23/77	26.3	5950.	490.1	0.0	0.0	0.0	0.0	0.0
08/24/77	25.8	6080.	493.0	0.0	0.0	0.0	0.0	0.0
08/29/77	28.1	5550.	495.9	0.0	0.0	0.0	0.0	0.0
08/30/77	27.3	5300.	536.5	0.0	0.0	0.0	0.0	0.0
08/31/77	27.3	5300.	598.8	0.0	0.0	0.0	0.0	0.0

TABLE A-3 VOLUME WEIGHTED AVERAGE DENSITY OF STRIPED BASS IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/03/77	0.6	1960.	64.2	0.0	0.0	0.0	0.0	0.0
02/04/77	0.4	1930.	48.0	0.0	0.0	0.0	0.0	0.0
02/08/77	0.9	2080.	67.8	0.0	0.0	0.0	0.0	0.0
02/09/77	1.6	2130.	66.1	0.0	0.0	0.0	0.0	0.0
02/10/77	1.8	2020.	49.8	0.0	0.0	0.0	0.0	0.0
02/11/77	1.7	2155.	57.5	0.0	0.0	0.0	0.0	0.0
02/14/77	2.3	2860.	54.0	0.0	0.0	0.0	0.0	0.0
02/15/77	2.0	2650.	531.8	0.0	0.0	0.0	0.0	0.0
02/16/77	1.9	2360.	530.6	0.0	0.0	0.0	0.0	0.0
02/17/77	2.0	2125.	531.6	0.0	0.0	0.0	0.0	0.0
02/22/77	2.8	1600.	519.1	0.0	0.0	0.0	0.0	0.0
02/23/77	2.6	1520.	333.1	0.0	0.0	0.0	0.0	0.0
02/24/77	2.4	1090.	346.4	0.0	0.0	0.0	0.0	0.0
02/28/77	3.2	1650.	370.4	0.0	0.0	0.0	0.0	0.0
03/01/77	3.0	1800.	529.7	0.0	0.0	0.0	0.0	0.0
03/02/77	4.0	2000.	335.3	0.0	0.0	0.0	0.0	0.0
03/03/77	4.0	2000.	324.3	0.0	0.0	0.0	0.0	0.0
03/06/77	4.0	750.	511.9	0.0	0.0	0.0	0.0	0.0
03/07/77	4.0	750.	502.1	0.0	0.0	0.0	0.0	0.0
03/08/77	3.7	203.	510.0	0.0	0.0	0.0	0.0	0.0
03/09/77	5.0	160.	531.1	0.0	0.0	0.0	0.0	0.0
03/10/77	4.6	140.	511.4	0.0	0.0	0.0	0.0	0.0
03/13/77	4.5	145.	519.9	0.0	0.0	0.0	0.0	0.0
03/14/77	4.4	126.	526.2	0.0	0.0	0.0	0.0	0.0
03/15/77	4.9	140.	524.7	0.0	0.0	0.0	0.0	0.0
03/16/77	5.5	130.	530.9	0.0	0.0	0.0	0.0	0.0
03/17/77	4.7	120.	542.3	0.0	0.0	0.0	0.0	0.0
03/20/77	5.4	110.	490.2	0.0	0.0	0.0	0.0	0.0
03/21/77	5.2	108.	543.1	0.0	0.0	0.0	0.0	0.0
03/22/77	4.6	100.	521.5	0.0	0.0	0.0	0.0	0.0
03/23/77	4.5	105.	545.4	0.0	0.0	0.0	0.0	0.0
03/28/77	6.8	570.	560.6	0.0	0.0	0.0	0.0	0.0
03/29/77	9.0	850.	510.6	0.0	0.0	0.0	0.0	0.0
03/30/77	6.2	610.	557.2	0.0	0.0	0.0	0.0	0.0
03/31/77	6.3	620.	577.3	0.0	0.0	0.0	0.0	0.0

TABLE A-3 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/04/77	8.0	140.	564.7	0.0	0.0	0.0	0.0	0.0
04/05/77	7.7	140.	565.6	0.0	0.0	0.0	0.0	0.0
04/06/77	8.7	145.	499.9	0.0	0.0	0.0	0.0	0.0
04/07/77	7.8	135.	552.9	0.0	0.0	0.0	0.0	0.0
04/11/77	8.9	120.	552.9	0.0	0.0	0.0	0.0	0.0
04/12/77	9.5	120.	451.5	0.0	0.0	0.0	0.0	0.0
04/13/77	9.9	120.	557.9	0.0	0.0	0.0	0.0	0.0
04/14/77	9.1	115.	503.8	0.0	0.0	0.0	0.0	0.0
04/18/77	11.8	130.	486.1	0.0	0.0	0.0	0.0	0.0
04/19/77	11.6	120.	515.8	0.0	0.0	0.0	0.0	0.0
04/20/77	13.3	130.	516.4	0.0	0.0	0.0	0.0	0.0
04/21/77	15.5	130.	501.6	0.0	0.0	0.0	0.0	0.0
04/25/77	13.0	110.	533.5	0.0	0.0	0.0	0.0	0.0
04/26/77	11.5	125.	539.9	0.0	0.0	0.0	0.0	0.0
04/27/77	12.4	135.	531.0	0.0	0.0	0.0	0.0	0.0
04/28/77	12.3	130.	512.9	0.0	0.0	0.0	0.0	0.0
05/02/77	14.4	130.	474.6	0.0	0.0	0.0	0.0	0.0
05/12/77	15.2	135.	517.8	0.0	0.0	0.0	0.0	0.0
05/16/77	16.2	130.	526.0	0.0	0.0	0.0	0.0	0.0
05/17/77	16.5	140.	536.8	0.0	1.9	1.9	0.0	3.7
05/18/77	17.1	180.	540.0	0.0	0.0	0.0	0.0	0.0
05/19/77	17.2	160.	517.4	0.0	0.0	1.9	0.0	1.9
05/22/77	19.5	150.	519.3	0.0	0.0	3.9	0.0	3.9
05/23/77	20.6	205.	1069.3	0.0	0.0	15.9	0.0	15.9
05/26/77	20.8	250.	523.1	0.0	0.0	21.0	0.0	21.0
05/31/77	20.1	4690.	586.7	0.0	0.0	18.7	0.0	18.7
06/01/77	20.8	4770.	511.6	0.0	0.0	68.4	0.0	68.4
06/02/77	20.5	4190.	501.8	0.0	12.0	153.4	0.0	165.4
06/05/77	20.2	4000.	506.0	0.0	0.0	156.1	0.0	156.1
06/06/77	20.1	4028.	508.2	0.0	19.7	346.3	0.0	366.0
06/07/77	19.9	4010.	496.1	0.0	14.1	245.9	0.0	260.0
06/08/77	21.3	4400.	579.8	0.0	15.5	227.7	0.0	243.2
06/12/77	21.3	4400.	465.5	0.0	0.0	49.4	0.0	49.4
06/13/77	21.0	4842.	977.6	0.0	0.0	31.7	3.1	34.8
06/16/77	21.7	5100.	470.6	0.0	0.0	17.0	4.2	21.2

TABLE A-3 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/20/77	22.8	6077.	458.8	0.0	0.0	8.7	2.2	10.9
06/26/77	24.6	5659.	1527.5	0.0	0.0	7.2	10.5	17.7
06/29/77	25.0	6500.	571.6	0.0	0.0	5.2	70.0	75.2
06/30/77	25.0	5950.	592.3	0.0	0.0	11.8	38.8	50.7
07/01/77	25.0	5950.	560.9	0.0	0.0	0.0	21.4	21.4
07/02/77	****	******	427.2	0.0	0.0	2.3	35.1	37.5
07/03/77	****	******	468.0	0.0	0.0	6.4	12.8	19.2
07/04/77	****	******	527.4	0.0	0.0	7.6	5.7	13.3
07/05/77	27.0	4770.	533.9	0.0	0.0	3.7	1.9	5.6
07/06/77	25.0	4350.	543.6	0.0	0.0	3.7	7.4	11.0
07/07/77	25.1	4450.	500.4	0.0	0.0	0.0	2.0	2.0
07/08/77	25.4	4350.	506.7	0.0	0.0	0.0	2.0	2.0
07/11/77	24.2	5203.	500.7	0.0	0.0	0.0	2.0	2.0
07/12/77	25.4	5940.	560.6	0.0	0.0	0.0	0.0	0.0
07/13/77	26.0	5940.	542.6	0.0	0.0	0.0	0.0	0.0
07/17/77	26.1	7300.	775.2	0.0	0.0	0.0	2.6	2.6
07/18/77	27.1	6880.	769.2	0.0	0.0	0.0	0.0	0.0
07/19/77	27.2	7490.	567.8	0.0	0.0	0.0	0.0	0.0
07/20/77	27.7	7700.	559.8	0.0	0.0	0.0	1.8	1.8
07/21/77	27.7	7700.	586.5	0.0	0.0	0.0	0.0	0.0
07/25/77	27.5	6425.	1059.8	0.0	0.0	0.0	0.0	0.0
07/29/77	27.8	6670.	584.8	0.0	0.0	0.0	1.7	1.7
08/01/77	28.0	6350.	606.4	0.0	0.0	0.0	0.0	0.0
08/02/77	26.9	5640.	588.1	0.0	0.0	0.0	0.0	0.0
08/03/77	27.8	5790.	573.1	0.0	0.0	0.0	0.0	0.0
08/04/77	27.8	5790.	569.4	0.0	0.0	0.0	0.0	0.0
08/08/77	28.4	5670.	587.1	0.0	0.0	0.0	0.0	0.0
08/09/77	27.8	5580.	592.5	0.0	0.0	0.0	0.0	0.0
08/10/77	27.8	5580.	560.5	0.0	0.0	0.0	0.0	0.0
08/11/77	****	******	548.9	0.0	0.0	0.0	0.0	0.0
08/15/77	26.0	******	586.3	0.0	0.0	0.0	0.0	0.0
08/16/77	26.0	******	593.3	0.0	0.0	0.0	0.0	0.0
08/17/77	27.7	7080.	584.1	0.0	0.0	0.0	1.7	1.7
08/18/77	27.5	6450.	577.3	0.0	0.0	0.0	0.0	0.0
08/19/77	27.7	7300.	525.0	0.0	0.0	0.0	0.0	0.0

* Data not collected.

TABLE A-3 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/23/77	26.3	5950.	490.1	0.0	0.0	0.0	0.0	0.0
08/24/77	25.8	6080.	493.0	0.0	0.0	0.0	2.0	2.0
08/29/77	28.1	5550.	495.9	0.0	0.0	0.0	0.0	0.0
08/30/77	27.3	5300.	536.5	0.0	0.0	0.0	0.0	0.0
08/31/77	27.3	5300.	598.8	0.0	0.0	0.0	0.0	0.0

TABLE A-4 VOLUME WEIGHTED AVERAGE DENSITY OF WHITE PERCH IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/03/77	0.6	1960.	64.2	0.0	0.0	0.0	0.0	0.0
02/04/77	0.4	1930.	48.0	0.0	0.0	0.0	0.0	0.0
02/08/77	0.9	2080.	67.8	0.0	0.0	0.0	0.0	0.0
02/09/77	1.6	2130.	66.1	0.0	0.0	0.0	0.0	0.0
02/10/77	1.8	2020.	49.8	0.0	0.0	0.0	0.0	0.0
02/11/77	1.7	2155.	57.5	0.0	0.0	0.0	0.0	0.0
02/14/77	2.3	2860.	54.0	0.0	0.0	0.0	0.0	0.0
02/15/77	2.0	2650.	531.8	0.0	0.0	0.0	0.0	0.0
02/16/77	1.9	2360.	530.6	0.0	0.0	0.0	0.0	0.0
02/17/77	2.0	2125.	531.6	0.0	0.0	0.0	0.0	0.0
02/22/77	2.8	1600.	519.1	0.0	0.0	0.0	0.0	0.0
02/23/77	2.6	1520.	333.1	0.0	0.0	0.0	0.0	0.0
02/24/77	2.4	1090.	346.4	0.0	0.0	0.0	0.0	0.0
02/28/77	3.2	1650.	370.4	0.0	0.0	0.0	0.0	0.0
03/01/77	3.0	1800.	529.7	0.0	0.0	0.0	0.0	0.0
03/02/77	4.0	2000.	335.3	0.0	0.0	0.0	0.0	0.0
03/03/77	4.0	2000.	324.3	0.0	0.0	0.0	0.0	0.0
03/06/77	4.0	750.	511.9	0.0	0.0	0.0	0.0	0.0
03/07/77	4.0	750.	502.1	0.0	0.0	0.0	0.0	0.0
03/08/77	3.7	203.	510.0	0.0	0.0	0.0	0.0	0.0
03/09/77	5.0	160.	531.1	0.0	0.0	0.0	0.0	0.0
03/10/77	4.6	140.	511.4	0.0	0.0	0.0	0.0	0.0
03/13/77	4.5	145.	519.9	0.0	0.0	0.0	0.0	0.0
03/14/77	4.4	126.	526.2	0.0	0.0	0.0	0.0	0.0
03/15/77	4.9	140.	524.7	0.0	0.0	0.0	0.0	0.0
03/16/77	5.5	130.	530.9	0.0	0.0	0.0	0.0	0.0
03/17/77	4.7	120.	542.3	0.0	0.0	0.0	0.0	0.0
03/20/77	5.4	110.	490.2	0.0	0.0	0.0	0.0	0.0
03/21/77	5.2	108.	543.1	0.0	0.0	0.0	0.0	0.0
03/22/77	4.6	100.	521.5	0.0	0.0	0.0	0.0	0.0
03/23/77	4.5	105.	545.4	0.0	0.0	0.0	0.0	0.0
03/28/77	6.8	570.	560.6	0.0	0.0	0.0	0.0	0.0
03/29/77	9.0	850.	510.6	0.0	0.0	0.0	0.0	0.0
03/30/77	6.2	610.	537.2	0.0	0.0	0.0	0.0	0.0
03/31/77	6.3	620.	577.3	0.0	0.0	0.0	0.0	0.0

TABLE A-4 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/04/77	8.0	140.	564.7	0.0	0.0	0.0	0.0	0.0
04/05/77	7.7	140.	565.6	0.0	0.0	0.0	0.0	0.0
04/06/77	8.7	145.	499.9	0.0	0.0	0.0	0.0	0.0
04/07/77	7.8	135.	552.9	0.0	0.0	0.0	0.0	0.0
04/11/77	8.9	120.	552.9	0.0	0.0	0.0	0.0	0.0
04/12/77	9.5	120.	451.5	0.0	0.0	0.0	0.0	0.0
04/13/77	9.9	120.	557.9	0.0	0.0	0.0	0.0	0.0
04/14/77	9.1	115.	503.8	0.0	0.0	0.0	0.0	0.0
04/18/77	11.8	130.	486.1	0.0	0.0	0.0	0.0	0.0
04/19/77	11.6	120.	515.8	0.0	0.0	0.0	0.0	0.0
04/20/77	13.3	130.	516.4	0.0	0.0	0.0	0.0	0.0
04/21/77	15.5	130.	501.6	0.0	0.0	0.0	0.0	0.0
04/25/77	13.0	110.	533.5	0.0	0.0	0.0	0.0	0.0
04/26/77	11.5	125.	539.9	0.0	0.0	0.0	0.0	0.0
04/27/77	12.4	135.	531.0	0.0	0.0	0.0	0.0	0.0
04/28/77	12.3	130.	512.9	0.0	0.0	0.0	0.0	0.0
05/02/77	14.4	130.	474.6	0.0	0.0	0.0	0.0	0.0
05/12/77	15.2	135.	517.8	0.0	0.0	0.0	0.0	0.0
05/16/77	16.2	130.	526.0	104.6	0.0	0.0	0.0	0.0
05/17/77	16.5	140.	536.8	102.5	0.0	0.0	0.0	0.0
05/18/77	17.1	180.	540.0	113.0	0.0	0.0	0.0	0.0
05/19/77	17.2	160.	517.4	88.9	0.0	0.0	0.0	0.0
05/22/77	19.5	150.	519.3	44.3	0.0	1.9	0.0	1.9
05/23/77	20.6	205.	1069.3	93.5	3.7	9.4	0.0	13.1
05/26/77	20.8	250.	523.1	55.4	0.0	26.8	0.0	26.8
05/31/77	20.1	4690.	586.7	10.2	1.7	6.8	0.0	8.5
06/01/77	20.8	4770.	511.6	27.4	0.0	19.5	0.0	19.5
06/02/77	20.5	4190.	501.8	19.9	0.0	51.8	0.0	51.8
06/05/77	20.2	4000.	506.0	0.0	0.0	81.0	0.0	81.0
06/06/77	20.1	4028.	508.2	0.0	0.0	57.1	0.0	57.1
06/07/77	19.9	4010.	496.1	2.0	0.0	44.3	0.0	44.3
06/08/77	21.3	4400.	579.8	0.0	0.0	39.7	0.0	39.7
06/12/77	21.3	4400.	465.5	0.0	0.0	8.6	0.0	8.6
06/13/77	21.0	4842.	977.6	0.0	0.0	2.0	0.0	2.0
06/16/77	21.7	6100.	470.6	0.0	0.0	4.2	0.0	4.2

TABLE A-4 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/20/77	22.8	6077.	458.8	2.2	4.4	10.9	0.0	15.3
06/26/77	24.6	5659.	1527.5	0.0	0.0	4.6	2.6	7.2
06/29/77	25.0	6500.	571.6	0.0	0.0	5.2	7.0	12.2
06/30/77	25.0	5950.	592.3	0.0	0.0	6.8	3.4	10.1
07/01/77	25.0	5950.	560.9	0.0	0.0	7.1	5.3	12.5
07/02/77	****	******	427.2	0.0	0.0	7.0	0.0	7.0
07/03/77	****	******	468.0	0.0	0.0	2.1	2.1	4.3
07/04/77	****	******	527.4	0.0	0.0	1.9	0.0	1.9
07/05/77	27.0	4770.	533.9	0.0	0.0	1.9	5.6	7.5
07/06/77	25.0	4350.	543.6	0.0	0.0	9.2	1.8	11.0
07/07/77	25.1	4450.	500.4	0.0	0.0	6.0	0.0	6.0
07/08/77	25.4	4350.	506.7	0.0	0.0	2.0	0.0	2.0
07/11/77	24.2	5203.	500.7	0.0	0.0	2.0	0.0	2.0
07/12/77	25.4	5940.	560.6	0.0	0.0	0.0	0.0	0.0
07/13/77	26.0	5940.	542.6	0.0	0.0	0.0	0.0	0.0
07/17/77	26.1	7300.	775.2	0.0	0.0	0.0	0.0	0.0
07/18/77	27.1	6880.	769.2	0.0	0.0	0.0	0.0	0.0
07/19/77	27.2	7490.	567.8	0.0	0.0	0.0	0.0	0.0
07/20/77	27.7	7700.	559.8	0.0	0.0	0.0	0.0	0.0
07/21/77	27.7	7700.	586.5	0.0	0.0	0.0	0.0	0.0
07/25/77	27.5	6425.	1059.8	0.0	0.0	0.0	0.0	0.0
07/29/77	27.8	6670.	584.8	0.0	0.0	0.0	0.0	0.0
08/01/77	28.0	6350.	606.4	0.0	0.0	0.0	0.0	0.0
08/02/77	26.9	6640.	588.1	0.0	0.0	0.0	0.0	0.0
08/03/77	27.8	5790.	573.1	0.0	0.0	0.0	0.0	0.0
08/04/77	27.8	5790.	569.4	0.0	0.0	0.0	0.0	0.0
08/08/77	28.4	5670.	587.1	0.0	0.0	0.0	0.0	0.0
08/09/77	27.8	5580.	592.5	0.0	0.0	0.0	0.0	0.0
08/10/77	27.8	5580.	560.5	0.0	0.0	0.0	0.0	0.0
08/11/77	****	******	548.9	0.0	0.0	0.0	0.0	0.0
08/15/77	26.0	******	586.3	0.0	0.0	0.0	1.7	1.7
08/16/77	26.0	******	593.3	0.0	0.0	0.0	0.0	0.0
08/17/77	27.7	7080.	584.1	0.0	0.0	0.0	0.0	0.0
08/18/77	27.5	6450.	577.3	0.0	0.0	0.0	0.0	0.0
08/19/77	27.7	7300.	525.0	0.0	0.0	0.0	0.0	0.0

* Data not collected.

TABLE A-4 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/23/77	26.3	5950.	490.1	0.0	0.0	0.0	0.0	0.0
08/24/77	25.8	6080.	493.0	0.0	0.0	0.0	0.0	0.0
08/29/77	28.1	5550.	495.9	0.0	0.0	0.0	0.0	0.0
08/30/77	27.3	5300.	536.5	0.0	0.0	0.0	0.0	0.0
08/31/77	27.3	5300.	598.8	0.0	0.0	0.0	0.0	0.0

TABLE A-5 VOLUME WEIGHTED AVERAGE DENSITY OF CLUPEIDS IN ENTRAINMENT COLLECTIONS FROM THE BOWLINE POINT PLANT DISCHARGE DURING 1977

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
02/03/77	0.6	1960.	64.2	0.0	0.0	0.0	0.0	0.0
02/04/77	0.4	1930.	48.0	0.0	0.0	0.0	0.0	0.0
02/08/77	0.9	2080.	67.8	0.0	0.0	0.0	0.0	0.0
02/09/77	1.6	2130.	66.1	0.0	0.0	0.0	0.0	0.0
02/10/77	1.8	2020.	49.8	0.0	0.0	0.0	0.0	0.0
02/11/77	1.7	2155.	57.5	0.0	0.0	0.0	0.0	0.0
02/14/77	2.3	2860.	54.0	0.0	0.0	0.0	0.0	0.0
02/15/77	2.0	2650.	531.8	0.0	0.0	0.0	0.0	0.0
02/16/77	1.9	2360.	530.6	0.0	0.0	0.0	0.0	0.0
02/17/77	2.0	2125.	531.6	0.0	0.0	0.0	0.0	0.0
02/22/77	2.8	1600.	519.1	0.0	0.0	0.0	0.0	0.0
02/23/77	2.6	1520.	333.1	0.0	0.0	0.0	0.0	0.0
02/24/77	2.4	1090.	346.4	0.0	0.0	0.0	0.0	0.0
02/28/77	3.2	1650.	370.4	0.0	0.0	0.0	0.0	0.0
03/01/77	3.0	1800.	529.7	0.0	0.0	0.0	0.0	0.0
03/02/77	4.0	2000.	335.3	0.0	0.0	0.0	0.0	0.0
03/03/77	4.0	2000.	324.3	0.0	0.0	0.0	0.0	0.0
03/06/77	4.0	750.	511.9	0.0	0.0	0.0	0.0	0.0
03/07/77	4.0	750.	502.1	0.0	0.0	0.0	0.0	0.0
03/08/77	3.7	203.	510.0	0.0	0.0	0.0	0.0	0.0
03/09/77	5.0	160.	531.1	0.0	0.0	0.0	0.0	0.0
03/10/77	4.6	140.	511.4	0.0	0.0	0.0	0.0	0.0
03/13/77	4.5	145.	519.9	0.0	0.0	0.0	0.0	0.0
03/14/77	4.4	126.	526.2	0.0	0.0	0.0	0.0	0.0
03/15/77	4.9	140.	524.7	0.0	0.0	0.0	0.0	0.0
03/16/77	5.5	130.	530.9	0.0	0.0	0.0	0.0	0.0
03/17/77	4.7	120.	542.3	0.0	0.0	0.0	0.0	0.0
03/20/77	5.4	110.	490.2	0.0	0.0	0.0	0.0	0.0
03/21/77	5.2	108.	543.1	0.0	0.0	0.0	0.0	0.0
03/22/77	4.6	100.	521.5	0.0	0.0	0.0	0.0	0.0
03/23/77	4.5	105.	545.4	0.0	0.0	0.0	0.0	0.0
03/28/77	6.8	570.	560.6	0.0	0.0	0.0	0.0	0.0
03/29/77	9.0	850.	510.6	0.0	0.0	0.0	0.0	0.0
03/30/77	6.2	610.	537.2	0.0	0.0	0.0	0.0	0.0
03/31/77	6.5	620.	577.3	0.0	0.0	0.0	0.0	0.0

TABLE A-5 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
04/04/77	8.0	140.	564.7	0.0	0.0	0.0	0.0	0.0
04/05/77	7.7	140.	565.6	0.0	0.0	0.0	0.0	0.0
04/06/77	8.7	145.	499.9	0.0	0.0	0.0	0.0	0.0
04/07/77	7.8	135.	552.9	0.0	0.0	0.0	0.0	0.0
04/11/77	8.9	120.	552.9	0.0	0.0	0.0	0.0	0.0
04/12/77	9.5	120.	451.5	0.0	0.0	0.0	0.0	0.0
04/13/77	9.9	120.	557.9	0.0	0.0	0.0	0.0	0.0
04/14/77	9.1	115.	503.8	0.0	0.0	0.0	0.0	0.0
04/18/77	11.8	130.	486.1	0.0	0.0	0.0	0.0	0.0
04/19/77	11.6	120.	515.8	0.0	0.0	0.0	0.0	0.0
04/20/77	13.3	130.	516.4	0.0	0.0	0.0	0.0	0.0
04/21/77	15.5	130.	501.6	0.0	0.0	0.0	0.0	0.0
04/25/77	13.0	110.	533.5	0.0	3.7	0.0	0.0	3.7
04/26/77	11.5	125.	539.9	0.0	0.0	0.0	0.0	0.0
04/27/77	12.4	135.	531.0	0.0	0.0	0.0	0.0	0.0
04/28/77	12.3	130.	512.9	0.0	0.0	0.0	0.0	0.0
05/02/77	14.4	130.	474.6	2.1	0.0	8.4	0.0	8.4
05/12/77	15.2	135.	517.8	17.4	0.0	9.7	0.0	9.7
05/16/77	16.2	130.	526.0	0.0	1.9	13.3	0.0	15.2
05/17/77	16.5	140.	536.8	61.5	0.0	11.2	0.0	11.2
05/18/77	17.1	180.	540.0	16.7	0.0	22.2	0.0	22.2
05/19/77	17.2	160.	517.4	0.0	0.0	32.9	0.0	32.9
05/22/77	19.5	150.	519.3	0.0	0.0	19.3	0.0	19.3
05/23/77	20.6	205.	1069.3	0.0	0.0	21.5	0.0	21.5
05/26/77	20.8	250.	523.1	26.8	0.0	34.4	0.0	34.4
05/31/77	20.1	4690.	586.7	1.7	0.0	15.3	0.0	15.3
06/01/77	20.8	4770.	511.6	3.9	0.0	27.4	0.0	27.4
06/02/77	20.5	4190.	501.8	0.0	0.0	41.8	0.0	41.8
06/05/77	20.2	4000.	506.0	0.0	0.0	49.4	0.0	49.4
06/06/77	20.1	4028.	508.2	0.0	0.0	33.5	0.0	33.5
06/07/77	19.9	4010.	496.1	0.0	0.0	32.3	0.0	32.3
06/08/77	21.3	4400.	579.8	0.0	0.0	17.2	0.0	17.2
06/12/77	21.3	4400.	465.5	0.0	0.0	27.9	0.0	27.9
06/13/77	21.0	4842.	977.6	0.0	0.0	6.1	0.0	6.1
06/16/77	21.7	6100.	470.6	0.0	0.0	0.0	0.0	0.0

TABLE A-5 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M) EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
06/20/77	22.8	6077.	458.8	0.0	0.0	0.0	0.0	0.0
06/26/77	24.6	5659.	1527.5	0.0	0.0	1.3	0.0	1.3
06/29/77	25.0	6500.	571.6	0.0	0.0	0.0	0.0	0.0
06/30/77	25.0	5950.	592.3	0.0	0.0	0.0	0.0	0.0
07/01/77	25.0	5950.	560.9	0.0	0.0	3.6	0.0	3.6
07/02/77	****	******	427.2	0.0	0.0	0.0	0.0	0.0
07/03/77	****	******	468.0	0.0	0.0	0.0	0.0	0.0
07/04/77	****	******	527.4	0.0	0.0	3.8	0.0	3.8
07/05/77	27.0	4770.	533.9	0.0	0.0	0.0	0.0	0.0
07/06/77	25.0	4350.	543.6	0.0	0.0	0.0	0.0	0.0
07/07/77	25.1	4450.	500.4	0.0	0.0	0.0	0.0	0.0
07/08/77	25.4	4350.	506.7	0.0	0.0	0.0	0.0	0.0
07/11/77	24.2	5203.	500.7	0.0	0.0	0.0	2.0	2.0
07/12/77	25.4	5940.	560.6	0.0	0.0	0.0	0.0	0.0
07/13/77	26.0	5940.	542.6	0.0	0.0	0.0	3.7	3.7
07/17/77	26.1	7300.	775.2	0.0	0.0	0.0	0.0	0.0
07/18/77	27.1	6880.	769.2	0.0	0.0	0.0	0.0	0.0
07/19/77	27.2	7490.	567.8	0.0	0.0	0.0	0.0	0.0
07/20/77	27.7	7700.	559.8	0.0	0.0	0.0	0.0	0.0
07/21/77	27.7	7700.	586.5	0.0	0.0	0.0	0.0	0.0
07/25/77	27.5	6425.	1059.8	0.0	0.0	0.0	0.9	0.9
07/29/77	27.8	6670.	584.8	0.0	0.0	0.0	1.7	1.7
08/01/77	28.0	6350.	606.4	0.0	0.0	0.0	0.0	0.0
08/02/77	26.9	5640.	588.1	0.0	0.0	0.0	0.0	0.0
08/03/77	27.8	5790.	573.1	0.0	0.0	0.0	0.0	0.0
08/04/77	27.8	5790.	569.4	0.0	0.0	0.0	0.0	0.0
08/08/77	28.4	5670.	587.1	0.0	0.0	0.0	0.0	0.0
08/09/77	27.8	5580.	592.5	0.0	0.0	0.0	1.7	1.7
08/10/77	27.8	5580.	560.5	0.0	0.0	0.0	0.0	0.0
08/11/77	****	******	548.9	0.0	0.0	0.0	0.0	0.0
08/15/77	26.0	******	586.3	0.0	0.0	0.0	0.0	0.0
08/16/77	26.0	******	593.3	0.0	0.0	0.0	0.0	0.0
08/17/77	27.7	7080.	584.1	0.0	0.0	0.0	0.0	0.0
08/18/77	27.5	6450.	577.3	0.0	0.0	0.0	1.7	1.7
08/19/77	27.7	7300.	525.0	0.0	0.0	0.0	0.0	0.0

* Data not collected.

TABLE A-5 (CONT.)

DATE	AVERAGE TEMPERATURE (DEGREES C)	AVERAGE CONDUCTIVITY (MICROMHOS)	TOTAL VOLUME (CU M)	DAILY AVERAGE DENSITY(NO./1000 CU M)				
				EGGS	YOLK-SAC LARVAE	LARVAE	JUVENILES	TOTAL (EXCLUDING EGGS)
08/23/77	26.3	5950.	490.1	0.0	0.0	0.0	0.0	0.0
08/24/77	25.8	6080.	493.0	0.0	0.0	0.0	0.0	0.0
08/29/77	28.1	5550.	495.9	0.0	0.0	0.0	0.0	0.0
08/30/77	27.3	5300.	536.5	0.0	0.0	0.0	0.0	0.0
08/31/77	27.3	5300.	598.8	0.0	0.0	0.0	0.0	0.0

APPENDIX B

BOWLINE POINT NET ENTRAINMENT ABUNDANCE INTAKE

TABLE B-1 VOLUME WEIGHTED AVERAGE DENSITY OF ATLANTIC TOMCOD BY LIFE STAGE AND SAMPLE DATE FROM INTAKE COLLECTIONS AT THE BOWLINE POINT PLANT, 1977

Date	Average Temperature (C)	Average Conductivity (μmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
8 MAR	3.7	250	411.6	0.0	109.3	2.4	0.0	111.8
15 MAR	4.0	129	357.6	0.0	1,252.8	14.0	0.0	1,266.8
22 MAR	5.0	110	147.0	0.0	163.3	0.0	0.0	163.3
29 MAR	5.5	490	456.6	0.0	159.9	100.7	0.0	260.6
31 MAY	21.0	4,385	523.8	0.0	0.0	0.0	0.0	0.0
2 JUN	20.8	4,930	294.0	0.0	0.0	0.0	0.0	0.0
6 JUN	20.3	4,090	416.7	0.0	0.0	0.0	0.0	0.0
8 JUN	19.7	4,100	549.6	0.0	0.0	0.0	0.0	0.0
13 JUN	20.9	4,440	515.1	0.0	0.0	0.0	0.0	0.0
16 JUN	21.8	5,695	474.0	0.0	0.0	0.0	0.0	0.0
20 JUN	22.9	6,158	496.8	0.0	0.0	0.0	0.0	0.0
23 JUN	22.8	5,815	510.6	0.0	0.0	0.0	0.0	0.0
27 JUN	24.5	5,355	534.6	0.0	0.0	0.0	0.0	0.0
30 JUN	24.6	6,368	498.9	0.0	0.0	0.0	0.0	0.0
5 JUL	26.4	5,495	553.8	0.0	0.0	0.0	0.0	0.0
12 JUL	25.1	5,485	537.6	0.0	0.0	0.0	0.0	0.0

TABLE B-2 VOLUME WEIGHTED AVERAGE DENSITY OF BAY ANCHOVY BY LIFE STAGE AND SAMPLE DATE FROM INTAKE COLLECTIONS AT THE BOWLINE POINT PLANT, 1977

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
8 MAR	3.7	250	411.6	0.0	0.0	0.0	0.0	0.0
15 MAR	4.0	129	357.6	0.0	0.0	0.0	0.0	0.0
22 MAR	5.0	110	147.0	0.0	0.0	0.0	0.0	0.0
29 MAR	5.5	490	456.6	0.0	0.0	0.0	0.0	0.0
31 MAY	21.0	4,385	523.8	0.0	0.0	0.0	0.0	0.0
2 JUN	20.8	4,930	294.0	0.0	0.0	0.0	0.0	0.0
6 JUN	20.3	4,090	416.7	0.0	0.0	12.0	0.0	12.0
8 JUN	19.7	4,100	549.6	0.0	0.0	18.2	0.0	18.2
13 JUN	20.9	4,440	515.1	0.0	0.0	13.6	0.0	13.6
16 JUN	21.8	5,695	474.0	0.0	0.0	80.2	0.0	80.2
20 JUN	22.9	6,158	496.8	0.0	0.0	68.4	0.0	68.4
23 JUN	22.8	5,815	510.6	0.0	0.0	31.3	0.0	31.3
27 JUN	24.5	5,355	534.6	0.0	0.0	31.8	0.0	31.8
30 JUN	24.6	6,368	498.9	0.0	0.0	198.4	0.0	198.4
5 JUL	26.4	5,495	553.8	0.0	0.0	175.2	0.0	175.2
12 JUL	25.1	5,485	537.6	0.0	0.0	267.9	0.0	267.9

TABLE B-3 VOLUME WEIGHTED AVERAGE DENSITY OF STRIPED BASS BY LIFE STAGE AND SAMPLE DATE FROM INTAKE COLLECTIONS AT THE BOWLINE POINT PLANT, 1977

Date	Average Temperature (C)	Average Conductivity (μmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
8 MAR	3.7	250	411.6	0.0	0.0	0.0	0.0	0.0
15 MAR	4.0	129	357.6	0.0	0.0	0.0	0.0	0.0
22 MAR	5.0	110	147.0	0.0	0.0	0.0	0.0	0.0
29 MAR	5.5	490	456.6	0.0	0.0	0.0	0.0	0.0
31 MAY	21.0	4,385	523.8	0.0	0.0	1.9	0.0	1.9
2 JUN	20.8	4,930	294.0	0.0	71.4	139.5	0.0	210.9
6 JUN	20.3	4,090	416.7	0.0	36.0	129.6	0.0	165.6
8 JUN	19.7	4,100	549.6	0.0	38.2	120.1	0.0	158.3
13 JUN	20.9	4,440	515.1	0.0	1.9	5.8	0.0	7.8
16 JUN	21.8	5,695	474.0	0.0	4.2	2.1	0.0	6.3
20 JUN	22.9	6,158	496.8	0.0	0.0	2.0	0.0	2.0
23 JUN	22.8	5,815	510.6	0.0	0.0	0.0	2.0	2.0
27 JUN	24.5	5,355	534.6	0.0	0.0	0.0	0.0	0.0
30 JUN	24.6	6,368	498.9	0.0	0.0	2.0	0.0	2.0
5 JUL	26.4	5,495	553.8	0.0	0.0	3.6	0.0	3.6
12 JUL	25.1	5,485	537.6	0.0	0.0	0.0	0.0	0.0

TABLE B-4 VOLUME WEIGHTED AVERAGE DENSITY OF WHITE PERCH BY LIFE STAGE AND SAMPLE DATE FROM INTAKE COLLECTIONS AT THE BOWLINE POINT PLANT, 1977

Date	Average Temperature (C)	Average Conductivity (μmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
8 MAR	3.7	250	411.6	0.0	0.0	0.0	0.0	0.0
15 MAR	4.0	129	357.6	0.0	0.0	0.0	0.0	0.0
22 MAR	5.0	110	147.0	0.0	0.0	0.0	0.0	0.0
29 MAR	5.5	490	456.6	0.0	0.0	0.0	0.0	0.0
31 MAY	21.0	4,385	523.8	0.0	0.0	1.9	0.0	1.9
2 JUN	20.8	4,930	294.0	0.0	0.0	17.0	0.0	17.0
6 JUN	20.3	4,090	416.7	0.0	2.4	55.2	0.0	57.6
8 JUN	19.7	4,100	549.6	0.0	0.0	65.5	0.0	65.5
13 JUN	20.9	4,440	515.1	0.0	0.0	0.0	0.0	0.0
16 JUN	21.8	5,695	474.0	0.0	0.0	2.1	0.0	2.1
20 JUN	22.9	6,158	496.8	0.0	0.0	2.0	0.0	2.0
23 JUN	22.8	5,815	510.6	0.0	0.0	3.9	0.0	3.9
27 JUN	24.5	5,355	534.6	0.0	0.0	1.9	0.0	1.9
30 JUN	24.6	6,368	498.9	0.0	0.0	0.0	0.0	0.0
5 JUL	26.4	5,495	553.8	0.0	0.0	5.4	0.0	5.4
12 JUL	25.1	5,485	537.6	0.0	0.0	0.0	0.0	0.0

TABLE B-5 VOLUME WEIGHTED AVERAGE DENSITY OF CLUPEIDS BY LIFE STAGE AND SAMPLE DATE FROM INTAKE COLLECTIONS AT THE BOWLINE POINT PLANT, 1977

Date	Average Temperature (C)	Average Conductivity (µmho)	Total Volume (m^3)	Daily Average Density (No./1,000 m^3)				
				Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
8 MAR	3.7	250	411.6	0.0	0.0	0.0	0.0	0.0
15 MAR	4.0	129	357.6	0.0	0.0	0.0	0.0	0.0
22 MAR	5.0	110	147.0	0.0	0.0	0.0	0.0	0.0
29 MAR	5.5	490	456.6	0.0	0.0	0.0	0.0	0.0
31 MAY	21.0	4,385	523.8	0.0	0.0	0.0	0.0	0.0
2 JUN	20.8	4,930	294.0	0.0	0.0	47.6	0.0	47.6
6 JUN	20.3	4,090	416.7	0.0	0.0	55.2	0.0	55.2
8 JUN	19.7	4,100	549.6	1.8	0.0	23.7	0.0	23.7
13 JUN	20.9	4,440	515.1	0.0	0.0	1.9	0.0	1.9
16 JUN	21.8	5,695	474.0	0.0	0.0	4.2	0.0	4.2
20 JUN	22.9	6,158	496.8	0.0	0.0	2.0	0.0	2.0
23 JUN	22.8	5,815	510.6	0.0	0.0	0.0	0.0	0.0
27 JUN	24.5	5,355	534.6	0.0	0.0	1.9	0.0	1.9
30 JUN	24.6	6,368	498.9	0.0	0.0	0.0	0.0	0.0
5 JUL	26.4	5,495	553.8	0.0	0.0	0.0	0.0	0.0
12 JUL	25.1	5,485	537.6	0.0	0.0	0.0	0.0	0.0

HR Library #150790

Orange and Rockland Utilities, Inc.

1977 HUDSON RIVER AQUATIC ECOLOGY STUDIES at the BOWLINE POINT GENERATING STATION

SEPTEMBER 1978

One Blue Hill Plaza
Pearl River, New York 10965

Lawler Matusky & Skelly Engineers
Environmental Science & Engineering Consultants

ORANGE AND ROCKLAND UTILITIES, INC.

1977 HUDSON RIVER AQUATIC ECOLOGY STUDIES AT THE BOWLINE POINT GENERATING STATION

SEPTEMBER 1978

LMSE-78/0121&169/152

LAWLER, MATUSKY & SKELLY ENGINEERS
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

TABLE OF CONTENTS

		Page
	LIST OF FIGURES	v
	LIST OF TABLES	ix
	ABSTRACT	xv
I.	SUMMARY OF REPORT CONCLUSIONS	
A.	Physicochemical Studies	I-1
B.	Biological Studies	I-2
	1. Ichthyoplankton	I-2
	2. River Fish	I-4
	3. Impinged Assemblages	I-5
II.	INTRODUCTION	
A.	Events Leading to the Report	II-1
B.	Objectives	II-2
	1. Physicochemical Studies	II-3
	2. Ichthyoplankton Studies	II-4
	3. River Fish	II-4
	4. Impinged Assemblages	II-4
III.	PHYSICOCHEMICAL STUDIES OF THE RECEIVING WATER BODY	
A.	Hydrodynamics : Freshwater Flow	III-1
B.	Water Quality	III-1
	1. Introduction	III-1
	2. Materials and Methods	III-2
	a. Field Sampling Locations	III-2
	b. Field Collection Procedures	III-3
	c. Laboratory Procedures	III-3
	3. Results and Discussion	III-4
	a. Temperature	III-4
	b. Dissolved Oxygen	III-4
	c. Specific Conductance	III-4
	d. pH; Turbidity; and Total Solids	III-5
	e. Nutrients	III-5

TABLE OF CONTENTS
(Continued)

		Page
IV.	ICHTHYOPLANKTON STUDIES	
A.	River Ichthyoplankton	IV-1
	1. Introduction	IV-1
	2. Materials and Methods	IV-2
	a. River Sampling Procedures	IV-2
	i. Nearfield Larval Abundance	IV-2
	ii. Special Juvenile Study	IV-4
	b. Laboratory Analysis	IV-7
	3. Results and Discussion	IV-8
	a. Annual Trends (1977)	IV-8
	i. Species Assemblage	IV-8
	ii. Temporal Distribution	IV-9
	iii. Spatial Distribution	IV-10
	iv. Length Frequency	IV-11
	b. Multi-year Trends	IV-13
	i. Species Assemblage	IV-13
	ii. White Perch	IV-14
	iii. Striped Bass	IV-14
	iv. Atlantic Tomcod	IV-15
	v. *Alosa* spp.	IV-16
	vi. Bay Anchovy	IV-16
B.	Plant Ichthyoplankton	IV-18
	1. Introduction	IV-18
	2. Materials and Methods	IV-18
	3. Results and Discussion	IV-19
	a. White Perch	IV-19
	b. Striped Bass	IV-20
	c. Atlantic Tomcod	IV-20
C.	Entrainment Involvement	IV-21
	1. Introduction	IV-21
	2. Comparison of River and Plant Abundances	IV-21
	a. White Perch	IV-21
	b. Striped Bass	IV-22
	c. Atlantic Tomcod	IV-22
D.	Gear Comparison Study	IV-23
	1. Introduction	IV-23
	2. Methods and Materials	IV-23
	a. Field Procedures	IV-23
	b. Laboratory Procedures	IV-25
	c. Analytical Methods	IV-25

TABLE OF CONTENTS
(Continued)

		Page
3.	Results	IV-27
a.	Comparison of Larval Abundances from One-Meter Versus Half-Meter Nets	IV-27
b.	Comparison of Larval Abundances Relative to Collection Velocity	IV-29
V.	RIVER FISH	
A.	Introduction	V-1
B.	Materials and Methods	V-1
1.	Station Locations	V-1
a.	Trawls	V-1
b.	Seines	V-2
2.	Field Collection Procedures	V-3
a.	Trawls	V-3
b.	Seines	V-4
3.	Laboratory Analysis Procedures	V-4
a.	Preliminary Analysis	V-4
b.	Secondary Analysis	V-4
i.	Length-Weight Measurements	V-5
ii.	Sex Determination	V-5
iii.	Scale Analysis	V-5
iv.	Back Calculation of Growth Using Scales	V-6
C.	Results and Discussion	V-7
1.	Annual Trend (1977)	V-7
a.	Species Composition	V-7
b.	Abundance and Biomass	V-7
i.	Bottom Trawls	V-7
ii.	Surface Trawls	V-8
iii.	Seines	V-9
c.	Spatial Variations	V-9
d.	Temporal Variations	V-10
e.	Length Distribution	V-12
i.	White Perch	V-12
ii.	Striped Bass	V-12
iii.	Atlantic Tomcod	V-12
iv.	Blueback Herring	V-13
v.	Alewife	V-13
vi.	Bay Anchovy	V-13
2.	Multi-year Trends (1971-1977) Trends	V-13
a.	Total Species Composition	V-15

TABLE OF CONTENTS
(Continued)

		Page
	b. Annual Abundance	V-16
	i. White Perch	V-16
	ii. Striped Bass	V-17
	iii. Atlantic Tomcod	V-18
	iv. Bay Anchovy	V-18
	v. Hogchoker	V-19
	vi. American Shad	V-19
	vii. Blueback Herring	V-20
	c. Habitat Preference and Nursery Areas	V-20
	i. Hudson River Stations	V-20
	ii. Pond vs. River Comparisons	V-22
VI.	IMPINGED ASSEMBLAGES	
A.	Introduction	VI-1
B.	Materials and Methods	VI-1
	1. Intake Characteristics	VI-1
	2. Sampling Frequency	VI-3
	3. Field Gear and Technique	VI-4
	4. Laboratory Analysis	VI-6
	5. Analytical Methods	VI-7
	6. Special Studies	VI-8
	a. Screen Collection Efficiency	VI-8
	b. Intake Barrier Study	VI-9
C.	Results and Discussion	VI-9
	1. Abundance and Distribution	VI-9
	a. Species Assemblage	VI-9
	b. Abundance and Biomass	VI-10
	c. Selected Species	VI-11
	i. White Perch	VI-11
	ii. Striped Bass	VI-12
	iii. Atlantic Tomcod	VI-12
	2. Special Studies	VI-14
	a. Collection Efficiency Studies	VI-14
	b. Barrier Net Study	VI-14
	i. Introduction	VI-14
	ii. Methods	VI-15
	iii. Results	VI-19
	iv. Discussion	VI-23
D.	Summary	VI-26
	BIBLIOGRAPHY	

LIST OF FIGURES

Figure No.	Title	Following Page
II-1	Location of the Bowline Point Plant and Other Generating Stations on the Lower Hudson River Estuary	II-1
II-2	General Plan of Circulating Water System	II-1
III-1	Lower Hudson River Long Term Monthly Average Fresh Water Flows	III-1
III-2	Hudson River Flow at Green Island	III-1
III-3	Water Quality Sampling Location	III-2
III-4	Mean Water Temperature	III-4
III-5	Mean Concentrations of Dissolved Oxygen	III-4
III-6	Mean Conductivity Values	III-4
IV-1	Ichthyoplankton Sampling Locations	IV-2
IV-2	Sampling Locations for the Juvenile Morone spp. Special Study	IV-4
IV-3	Mean Abundance of Atlantic Tomcod Larvae by Station	IV-10
IV-4	Mean Abundance of Bay Anchovy Larvae by Station	IV-10
IV-5	Mean Abundance of Striped Bass Larvae by Station	IV-11
IV-6	Mean Abundance of White Perch Larvae by Station	IV-11
IV-7	Mean Abundance of White Perch Bottom Collections During the Juvenile Morone spp. Special Study	IV-11
IV-8	Mean Abundance of Striped Bass Bottom Collections During the Juvenile Morone spp. Special Study	IV-11
IV-9	Life Stage Distribution Over Time for Atlantic Tomcod Larvae	IV-11
IV-10	Life Stage Distribution Over Length For Atlantic Tomcod Larvae	IV-11

LIST OF FIGURES
(Continued)

Figure No.	Title	Following Page
IV-11	Life Stage Distribution Over Time for Striped Bass Larvae	IV-12
IV-12	Life Stage Distribution Over Length for Striped Bass Larvae	IV-12
IV-13	Length Frequency Distribution of Striped Bass Larvae	IV-12
IV-14	Life Stage Distribution Over Time for White Perch Larvae	IV-12
IV-15	Life Stage Distribution Over Length for White Perch Larvae	IV-12
IV-16	Length Frequency Distribution of White Perch Larvae	IV-12
IV-17	Length Frequency Distribution of Bay Anchovy Larvae	IV-13
IV-18	Life Stage Distribution Over Length for Bay Anchovy Larvae	IV-13
IV-19	Life Stage Distribution Over Time for Bay Anchovy Larvae	IV-13
IV-20	Mean Abundance of White Perch Larvae	IV-14
IV-21	Mean Abundance of Striped Bass Larvae	IV-15
IV-22	Mean Abundance of Atlantic Tomcod Larvae	IV-15
IV-23	Mean Abundance of *Alosa* spp. Larvae	IV-16
IV-24	Mean Abundance of Bay Anchovy Larvae	IV-17
IV-25	Ichthyoplankton Sampling Apparatus	IV-18
IV-26	Bongo Type Frame Sampling Apparatus	IV-23
IV-27	Simultaneous Sampling Arrangement for Low Velocity Sampling	IV-23

LIST OF FIGURES
(Continued)

Figure No.	Title	Following Page
IV-28	Abundance of *Morone* spp. for All Collections Versus Tidal Current	IV-26
V-1	Trawl and Seine Sampling Locations	V-1
V-2	Percent Composition of Six Selected Species	V-16
V-3	Catch of Total Fish Per 10-Minute Bottom Trawl Effort at Three Stations	V-21
V-4	Catch of Hogchoker Per 10-Minute Bottom Trawl Effort at Three Stations	V-21
V-5	Catch of White Perch Per 10-Minute Bottom Trawl Effort at Three Stations	V-21
V-6	Catch of Atlantic Tomcod Per 10-Minute Bottom Trawl Effort at Three Stations	V-21
V-7	Catch of Striped Bass Per 10-Minute Bottom Trawl Effort at Three Stations	V-21
VI-1	Location of the Barrier Net, Tag and Release Sites, and Bowline Pond Beach Seine Sites	VI-15
VI-2	Generalized Illustration of Barrier Net Deployment	VI-16
VI-3	1.27 cm Vs. 0.95 cm Mesh Barrier Net Comparison Study	VI-16
VI-4	Mean Total Length for White Perch and Striped Bass at Unit 1 and Unit 2	VI-20
VI-5	Mean Length of White Perch in Impingement Collections	VI-20
VI-6	White Perch and Striped Bass Catch Per Seine Effort for Bowline Pond Collections	VI-22
VI-7	Impingement Rates for White Perch	VI-22
VI-8	Impingement Rates for Striped Bass	VI-22

LIST OF TABLES

Table No.	Title	Following Page
II-1	Plant Operational Data	II-1
III-1	Water Quality Sampling Dates	III-2
III-2	Methods Utilized and Detection Limits of Water Quality Parameters	III-3
III-3	Water Quality Values at Station BLC	III-4
IV-1	Ichthyoplankton Sampling Program	IV-2
IV-2	Sampling Program for the Juvenile *Morone* spp. Special Study	IV-4
IV-3	Ichthyoplankton Species Inventory	IV-8
IV-4	Fish Egg Abundance in All Depth Collections at all Times at Station Bowline East, Bowline Channel, and Bowline West	IV-9
IV-5	Ichthyoplankton Abundance in all Depth Collections at all Times at Station Bowline East, Bowline Channel, Bowline West, Bowline Pond Long, and Bowline Pond Short	IV-9
IV-6	Four-Way ANOVA for White Perch Larvae (Yolk-Sac and Post-Yolk-Sac) on Stations, Dates, Photoperiod and Depth	IV-11
IV-7	Four-Way ANOVA for Striped Bass Larvae (Yolk-Sac and Post-Yolk-Sac) on Stations, Dates, Photoperiod and Depth	IV-11
IV-8	Abundance of Juvenile *Morone* spp. in the Special Study Collections	IV-11
IV-9	Length Frequency by Life Stages of *Alosa* spp.	IV-12
IV-10	Occurrence of Ichthyoplankton Species	IV-14
IV-11	Mean Seasonal Abundance of White Perch Larvae	IV-14

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
IV-12	Mean Seasonal Abundance of Striped Bass Larvae	IV-15
IV-13	Mean Seasonal Abundance of Atlantic Tomcod Larvae	IV-16
IV-14	Mean Seasonal Abundance of Alosa spp. Larvae	IV-16
IV-15	Mean Seasonal Abundance of Bay Anchovy Larvae	IV-17
IV-16	Sampling Dates for the 1977 Bowline Point Entrainment Abundance Program	IV-18
IV-17	Bowline Point Plant Intake Through-Net Velocities as a Function of Tidal Height, Circulator Pump Operation, and Sampling Depth	IV-18
IV-18	White Perch Entrainment Abundance	IV-20
IV-19	Striped Bass Entrainment Abundance	IV-20
IV-20	Atlantic Tomcod Entrainment Abundance	IV-20
IV-21	Mean Seasonal Abundance of White Perch, Striped Bass and Atlantic Tomcod Larvae in Intake Collections	IV-21
IV-22	Seasonal Averages of Selected Fish Larvae Taxa in River and Intake Collections	IV-21
IV-23	Bowline Point W-Ratio Calculations for White Perch, Striped Bass and Atlantic Tomcod	IV-22
IV-24	Frequency of Ichthyoplankton Gear Comparison Sampling At Selected Velocities	IV-24
IV-25	Abundance of Larvae from 0.5 and 1.0 M Nets Deployed in a Bongo Arrangement At Station BW	IV-28
IV-26	Statistical Analysis of Mean Abundances of Ichthyoplankton Collected in 0.5 and 1.0 M Nets Deployed in a Bongo Arrangement	IV-28

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
IV-27	Larval Abundance in Collections at Low vs High Velocity with 0.5 and 1.0 M Nets	IV-29
IV-28	Larval Abundance in Collections at Medium vs High Velocity with 0.5 and 1.0 M Nets	IV-29
IV-29	Statistical Analysis of Mean Abundances of Ichthyoplankton for 0.5 and 1.0 M Nets at High vs Low Sampling Velocities	IV-30
IV-30	Statistical Analysis of Mean Abundances of Ichthyoplankton for 0.5 and 1.0 M Nets at High vs Medium Sampling Velocities	IV-30
IV-31	Statistical Analysis of Mean Abundances of Ichthyoplankton Collected in 0.5 M Nets at Low Velocity and 1.0 M Nets at High Velocity	IV-30
V-1	River Fish Sampling Program	V-1
V-2	Abundance and Percent Composition of Combined Collections	V-7
V-3	Fish Species Inventory	V-7
V-4	Abundance and Percent Composition of Combined Collections	V-7
V-5	Biomass and Percent Composition of Combined Collections	V-8
V-6	Abundance and Percent Composition of Combined Collections Surface Trawls (BC, BID)	V-8
V-7	Biomass and Percent Composition of Combined Collections Surface Trawls (BC, BID)	V-8
V-8	Abundance and Percent Composition for Surface Trawl Collections at Station BP	V-8
V-9	Biomass and Percent Composition for Surface Trawl Collections at Station BP	V-9

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
V-10	Abundance and Percent Composition of Combined Collections - Bowline River Seines	V-9
V-11	Abundance and Percent Composition of Combined Collections - Bowline Pond Seines	V-9
V-12	Biomass and Percent Composition of Combined Collections - Bowline River Seines	V-9
V-13	Biomass and Percent Composition of Combined Collections - Bowline Pond Seines	V-9
V-14	Monthly Mean Catch Per Effort Bottom Trawl Collections at Station BB	V-10
V-15	Monthly Mean Catch Per Effort Bottom Trawl Collections at Station BID	V-10
V-16	Monthly Mean Catch Per Effort Bottom Trawl Collections at Station BC	V-10
V-17	Monthly Mean Catch Per Effort Surface Trawl Collections at Station BP	V-10
V-18	Monthly Mean Catch Per Effort Surface Trawl Collections at Station BC, BID Combined	V-10
V-19	Monthly Mean Catch Per Effort - Bowline Pond Seine Collections	V-10
V-20	Monthly Mean Catch Per Effort - Bowline River Seine Collections	V-10
V-21	Monthly Mean Catch Per Effort - Bowline Bottom Trawl Collections	V-11
V-22	Length-Frequency of White Perch All Stations - All Gears	V-12
V-23	Length-Frequency of White Perch - All Pond Seines	V-12
V-24	Length-Frequency of Striped Bass All Stations - All Gears	V-12

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
V-25	Length-Frequency of Atlantic Tomcod All Stations - All Gears	V-12
V-26	Length-Frequency of Blueback Herring All Stations - All Gears	V-13
V-27	Length-Frequency of Alewife All Stations - All Gears	V-13
V-28	Length-Frequency of Bay Anchovy All Stations - All Gears	V-13
V-29	Summary of Abundance and Percent Composition of Fish in River and Pond Collections for All Gears and Stations	V-15
V-30	Fish Species Inventory	V-15
V-31	Relative Ranking of the Ten Most Abundant Fish Species	V-16
V-32	Comparison of Average Catch Per Unit Effort for Day Sampling During Common Months and at Common Stations	V-17
V-33	Length-Frequency of White Perch Bowline Bottom Trawl Collections at Station BB	V-22
V-34	Length-Frequency of White Perch Bowline Bottom Trawl Collections at Station BID	V-22
V-35	Length-Frequency of White Perch Bowline Bottom Trawl Collections at Station BC	V-22
V-36	Catch Per Effort of Selected Fish Species in Pond and River Seine and Surface Trawl Collections	V-23
VI-1	Impingement Sampling Dates	VI-3
VI-2	Screen Cleaning and Collection Procedure	VI-4
VI-3	Common and Scientific Names of Impinged Fish	VI-10

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
VI-4	Abundance and Percent Composition of Impingement Collections	VI-10
VI-5	Biomass and Percent Composition of Impingement Collections	VI-10
VI-6	Relative Ranking of the Ten Most Abundant Fish Species in Impingement Collections	VI-10
VI-7	Weekly Estimated Impingement Rate for all Fish Species - 1977	VI-10
VI-8	Weekly Estimated Rate for All Fish Species - 1976	VI-10
VI-9	Weekly Estimated Rate for All Fish Species - 1975	VI-10
VI-10	Weekly Estimated Rate For All Fish Species - 1974	VI-10
VI-11	Average Monthly Circulating Water Flow and Impingement Rate of Fish	VI-10
VI-12	Weekly Estimated Impingement Rate for White Perch	VI-11
VI-13	Length-Frequency of White Perch	VI-11
VI-14	Mean Length of White Perch in Impingement Collections	VI-11
VI-15	Weekly Estimated Impingement Rate for Striped Bass	VI-12
VI-16	Length-Frequency of Striped Bass	VI-12
VI-17	Mean Length of Striped Bass in Impingement Collections	VI-12
VI-18	Weekly Estimated Impingement Rate for Atlantic Tomcod	VI-12
VI-19	Length-Frequency of Atlantic Tomcod	VI-13

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
VI-20	Mean Length of Atlantic Tomcod in Impingement Collections	VI-13
VI-21	Impingement Collection Efficiency	VI-14
VI-22	Recovery Rate of Tagged Fish by Unit and Traveling Screen	VI-14
VI-23	The Number of Samples Collected to Determine the Effectiveness of a Barrier Net in Reducing Impingement	VI-17
VI-24	Periods of Barrier Net Deployment	VI-18
VI-25	Abundance of White Perch and Striped Bass at Unit 1 and Unit 2 During Barrier Net Study	VI-20
VI-26	Recovery of Tagged Fish During Barrier Net Study	VI-21
VI-27	Total Flow Sampled per Month, Total Plant Flow Per Month and Percentage Sampled	VI-26

ABSTRACT

Data are summarized and presented to document a study of the ichthyoplankton and fish communities within the segment of the Lower Hudson River between kilometer points 56 and 61 in an attempt to determine the impact on the fish population from the operation of the Bowline Point Generating Station.

The study included determinations of species composition distribution, abundance and biomass. Data collection emphasized the growth and development of the major species of fish, which included striped bass, white perch, Atlantic tomcod, Alosa spp., and bay anchovy. The impingement of fish was also studied.

Physicochemical investigations were made to further describe the environmental stresses applied to the estuarine communities from natural conditions as well as from the operation of the power generating station.

Data were collected and presented in a format suitable for comparisons with present and previous studies conducted in the region. Where applicable, comparisons were made with data collected in previous studies. Documentation was also provided on special studies investigating the impingement process and means of reducing impingement.

The dominant organisms found within the study area were characteristically estuarine organisms. The biota were diversified and dynamic, providing temporal and spatial changes in response to changing physicochemical conditions. No harmful effects were apparent from the operation of the Bowline Point Generating Station.

I. SUMMARY OF REPORT CONCLUSIONS

The studies reported herein indicate that operation of the existing once-through cooling water intake system at the Bowline Point Generating Station has had negligible impact on the Hudson River fish community. It is further concluded that the operation of the Bowline Point plant's intake system will not interfere with the balanced population. The results reported herein should be placed in the context of the extensive Hudson River ecological investigations conducted during the 1960's and 1970's. More specifically, this report provides the latest data collected in 1977 and part of 1978 and represents a continuation of comprehensive biological investigations at Bowline Point that began in 1971.

A. PHYSICOCHEMICAL STUDIES

The monthly average freshwater flow in the Lower Hudson River during 1977 exceeded the 55-year (1918-1973), long term average during the spring (March, April) and throughout the fall (September-December). The monthly average freshwater flow fell below the 55-year average throughout the summer (June-August). Salt intrusion in the Bowline area occurred from June through September, coincident with the low freshwater period.

Water samples for chemical analyses were obtained simultaneously with biological collections in order to ascertain the status of the chemical constituents in the Bowline segment of the Hudson River. Average temperatures measured in the river stations ranged from 32 to 82 F (0-28 C).

Dissolved oxygen levels in the Bowline area were usually higher than 5.0 mg/l, the NYSDEC* standard for this section of the river. The pH

*New York State Department of Environmental Conservation.

and alkalinity values were typical of estuarine waters. Chloride and solids concentrations were directly related to the movement of the salt front and fell within expected values for an estuary. Nutrient levels (phosphorus, nitrate, and silicon) were sufficient throughout the year to support extensive algal growth.

B. BIOLOGICAL STUDIES

1. Ichthyoplankton

Of the 19 species of larvae identified from the river collections, the ichthyoplankton community of the Bowline vicinity was dominated by bay anchovy, Atlantic tomcod, striped bass, white perch, and Alosa spp.

Distinct phases in seasonal succession of total larvae and eggs were recorded in 1977 as they were during the previous year. They consist of the Atlantic tomcod population (March-early May), followed by white perch, striped bass, and Alosa spp. (mid May-June), and then finally bay anchovy (July-August).

No clear pattern of spatial distribution was demonstrated for Atlantic tomcod, Alosa spp. or bay anchovy for three river stations, although during peak concentrations of tomcod and bay anchovy, the west station exhibited lower larval densities. Striped bass and white perch larvae appeared to be randomly distributed across the river, while the juvenile forms of white perch and striped bass exhibited a preference for the protected shoal areas.

Peak tomcod abundance was represented in the Bowline Point vicinity by yolk-sac and post-yolk sac larvae in the 6 to 9 mm length range.

Striped bass larvae length distribution during the period of peak abundance was from 3 to 14 mm, with a median length of approximately 6 mm (post-yolk sac life stage). The larval length distribution during the period of peak white perch abundance covered a range of 2-12 mm with a median of approximately 5 mm. Bay anchovy growth, as demonstrated by length frequency distribution, was difficult to describe due to the continuous spawn throughout the summer. All bay anchovy larvae greater than 5 mm had developed into the post-yolk sac life stage.

Throughout the 5 years of study (1973-1977), the same larval species have dominated the ichthyoplankton collections. Average yearly concentrations have varied over the years of study indicating cyclic trends inherent in most natural populations. White perch exhibited their highest abundances in 1975, preceeded in 1974 by their lowest abundance. Striped bass demonstrated their highest seasonal mean abundance in 1973 and have maintained a relatively stable mean abundance in subsequent years. Atlantic tomcod abundances have shown a cyclic pattern of relative abundances. Odd-numbered years (1975, 1977) have provided mean seasonal abundances approximately twice those of the previous year's (1974 and 1976) mean seasonal abundance.

Alosa spp. abundance in the Bowline vicinity throughout 1977 was low relative to previous years, not surprising in light of the higher salinities in the Bowline area during the summer of 1977 and the preference towards freshwater characteristic of the Alosa spp. In response to the same physicochemical stimuli, higher salinity, bay anchovy concentrations in the Bowline vicinity in 1977 were higher than in the previous years.

Bowline entrainment values reflected the river concentrations. Plant abundances were lower than river abundances for all species investigated. The ratios for river mean seasonal abundance to plant mean seasonal abondance for white perch, striped bass and Atlantic tomcod were 0.27, 0.40 and 0.68, respectively.

2. River Fish

Of the 43 species represented in the river fish collections, blueback herring, hogchoker and white perch, predominated, followed by Atlantic tomcod, bay anchovy and striped bass. Hogchoker and white perch, were associated with the bottom collections, while other species, bay anchovy and blueback herring, were associated with the surface collections. The near-shore collections reflected primarily young-of-the-year fish and were dominated by white perch, striped bass, bay anchovy and blueback herring.

Distribution differences were encountered between the three primary trawling stations, BB, BID and BC. Only white perch and spot showed approximately equal distribution. Atlantic tomcod and hogchoker avoided the shallower BB station while striped bass, pumpkinseed and bay anchovy appeared to prefer this transition zone between the shallow shoreline on the west side and the deeper water near BID on the east.

Abundances from pond seine collections were almost three times those found in the corresponding river seine collections.

Population fluctuations in the bottom trawl collections were marked primarily by the movement of the hogchoker, Atlantic tomcod, spot, striped bass and white perch. The greatest average abundance in bottom trawls was attained in July corresponding to recruitment of

juvenile Atlantic tomcod and striped bass into the Bowline vicinity, and during October and November corresponding to fall movements of white perch and hogchoker.

The sampling program from 1971 through 1977 provided a species inventory of 55 species. Except for white perch, the dominant segment of the Bowline fish community was seldom composed of the same three fish species.

The seven-year trend in white perch density suggests a fairly stable overall population whose density appears to fluctuate over the time period studied. Striped bass abundances have also fluctuated over the past seven years.

Atlantic tomcod, bay anchovy, hogchoker, American shad and blueback herring all showed fluctuating abundances indicative of cyclic phenomena characteristic of normal populations.

3. Impinged Assemblages

A total of 49 species of fish were identified from the 1977 Bowline impingement collections. Of these, only four species, American eel, pumpkinseed, striped bass and white perch, were collected in every month, while 12 species were collected during only one month. The collections were dominated by white perch (50%), followed by rainbow smelt (11%), blueback herring (10%), gizzard shad (7%) and striped bass (6%).

The average monthly impingement rate for 1977 was the lowest recorded to date (1973-1977) although water usage rate was the highest. Over the past three years during which both Unit 1 and 2 have been in operation, the impingement rate for white perch has been

decreasing. Length frequency data indicate that the predominance of white perch impinged were young-of-the-year, within their first year of growth. Striped bass exhibited the same trends as the cogeneric white perch; decreasing numbers impinged over the past three years.

Atlantic tomcod impingement rates have been variable over the past three years, reflecting river abundance.

Special investigations into screen collection efficiency were conducted yielding an overall efficiency of 78% with a tendency toward lower efficiencies during early fall and higher efficiencies in early spring.

Impingement mitigation was evaluated through deployment of a barrier net placed in front of the intake structure. Observations were made indicating that a net could be deployed in a reduced velocity field that would direct the fish under study, primarily white perch and striped bass, away from the intake and impingement. The results of the study indicate that through deployment of the barrier net there has been a probable reduction in impingement of white perch and striped bass.

II. INTRODUCTION

A. EVENTS LEADING TO THE REPORT

The ecological studies described herein were conducted in the Hudson River in the vicinity of the Bowline Point Generating Station, a fossil-fueled steam electric power plant operated by Orange & Rockland Utilities, Inc. (O&R), and jointly owned by O&R and Consolidated Edison Company of New York, Inc. (one-third and two-thirds, respectively). It is located in Haverstraw, N.Y. approximately 60 km north of the southern tip of Manhattan (Figure II-1).

Lawler, Matusky & Skelly Engineers (LMS) has been engaged as environmental engineering consultants by O&R since 1968. Prior to 1 November 1974, LMS operated under the name of Quirk, Lawler & Matusky Engineers (QLM). The environmental studies which LMS conducted on behalf of O&R have been related to the general ecology, water chemistry, and hydrology of the area of the Hudson River under the influence of the Bowline Point Generating Station.

Bowline Unit 1 has been operating since September 1972; Unit 2 began operation in May 1974. Table II-1 lists the plant operational data for both units, and Figure II-2 diagrams the circulating water system at the Bowline plant. A previous report (O&R, 1977) reviewed tenancy agreements, auxiliary structures, circulating water systems, and protective facilities.

During 1971 and 1972, LMS collected preoperational data for Units 1 and 2 of the Bowline Point Generating Station. Previous reports (O&R 1977, QLM 1974) assessed baseline biological water quality conditions observed in the Bowline vicinity during that period. Since Unit 1 became operational during 1972, the results of 1973 aquatic ecology studies were considered first-year operational

FIGURE II-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LOCATION OF THE BOWLINE POINT PLANT AND OTHER GENERERATING STATIONS ON THE LOWER HUDSON RIVER ESTUARY

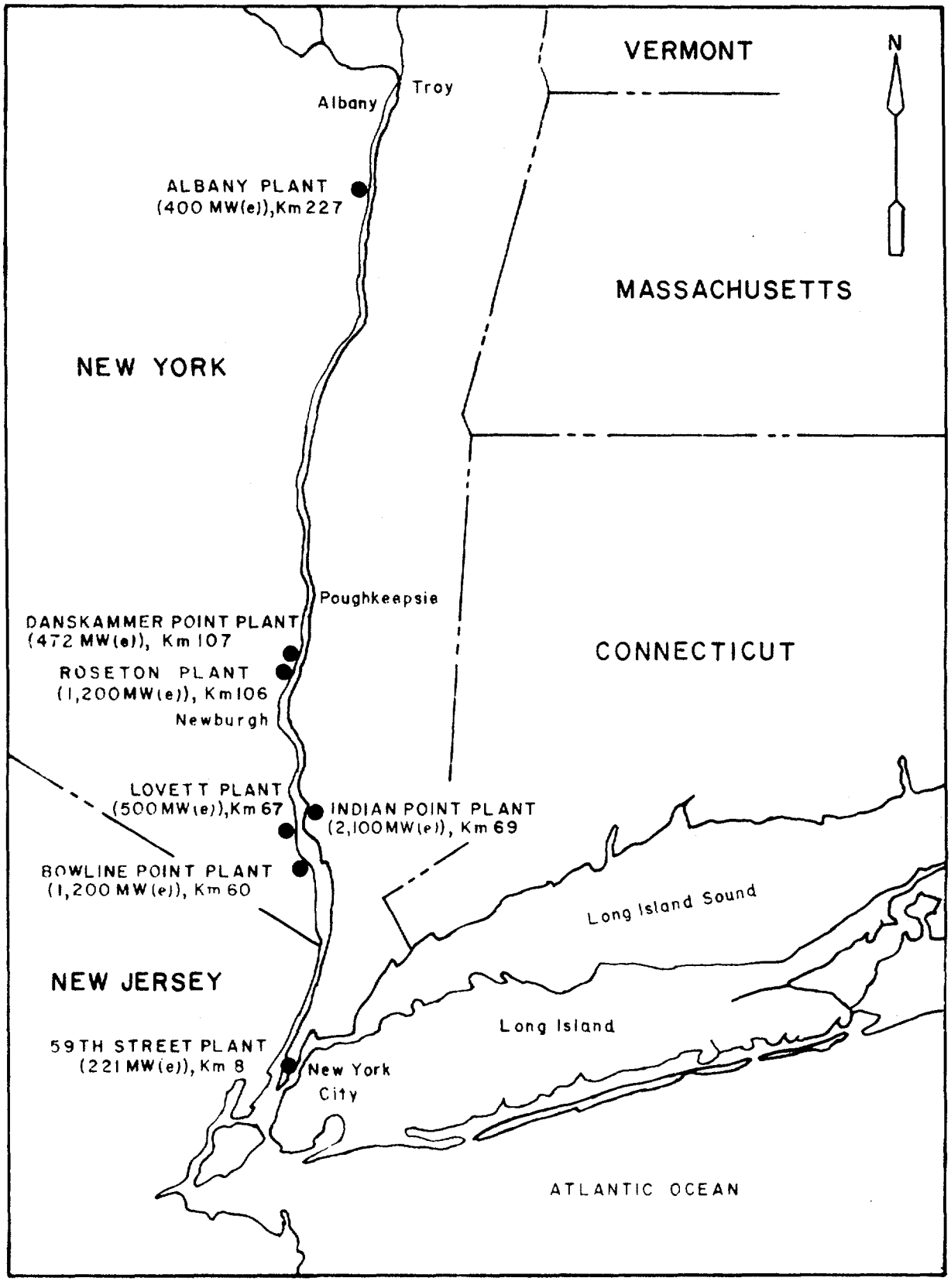


TABLE II-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

PLANT OPERATIONAL DATA

BOWLINE POINT GENERATING STATION

OPERATING CHARACTERISTICS	UNIT 1 & 2 (EACH)
Nominal Generating Capacity, MW(e)	600
Cooling Water Flow Rate (m^3/min)	
Condenser	1,421.7
Service Water	32.1
Heat Rejection Rate (Btu/hr)	2.8×10^9
Cooling Water Temperature Rise (F)	14.9

INTAKE CHARACTERISTICS	
Type of Intake	Shoreline
Maximum Approach Velocity to the Screens (cm/sec)	23.3
Pipe Diameter from Intake to Condenser (m)	3.2
Total flow (m^3/min)	1,453.8

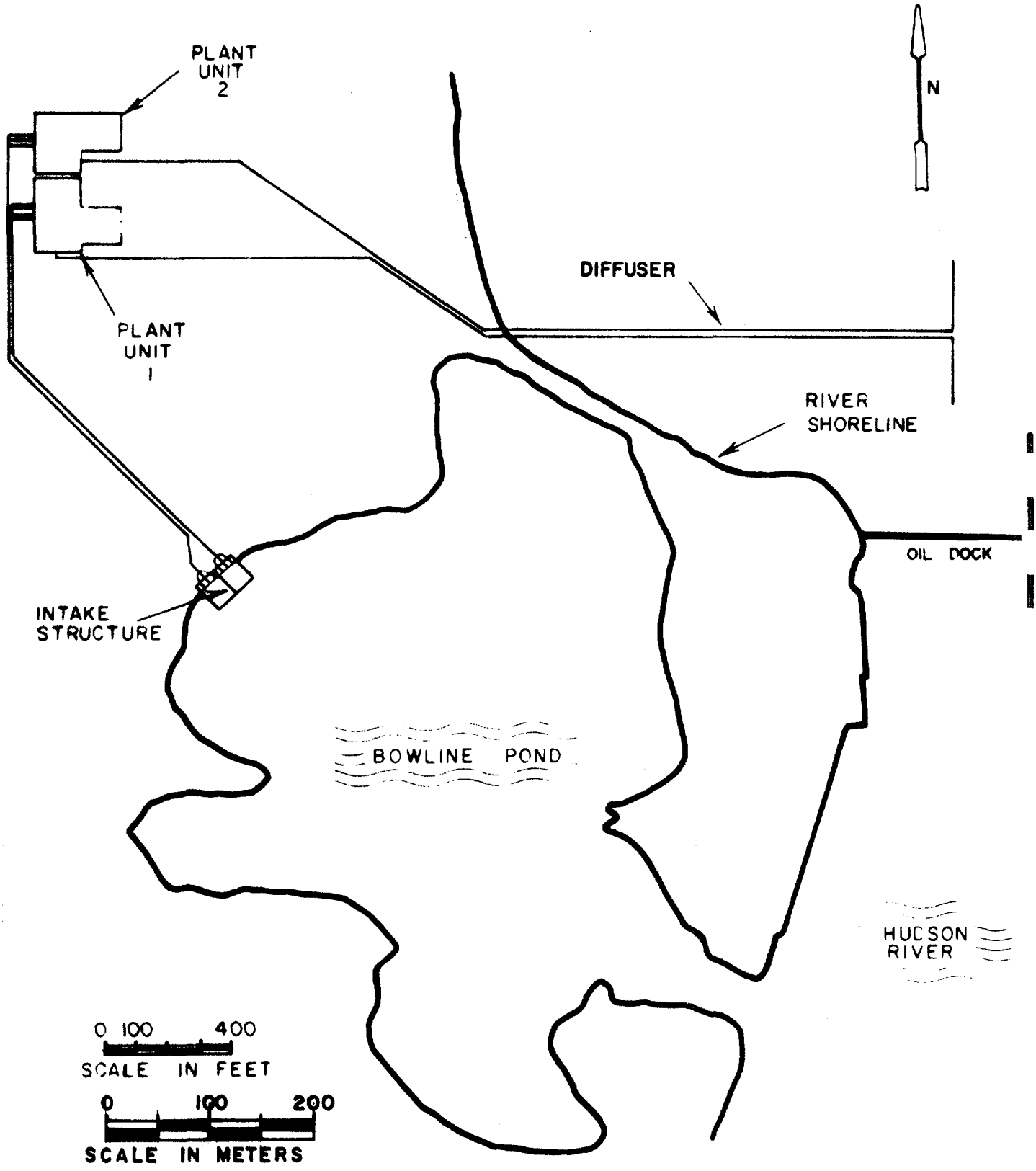
OUTFALL CHARACTERISTICS	
Length of Subaqueous Discharge Pipe from Existing Hudson River Shoreline (m)	365.8
Pipe Velocity (cm/sec)	300.0
Length of Diffuser (m)	67.1
Number of Diffuser Ports	8
Inside Diameter of Diffuser Ports (m)	0.9
Port Spacing (m)	7.6
Initial Jet Velocity (cm/sec)	454.5
Total Diffuser Flow (m^3/min)	1,453.8
Average Depth of Port Centerline Below Mean Low Water (m)	4.6
Average Depth to River Bottom Below Mean Low Water (m)	6.4
Port Temperature Rise Above River Ambient (F)	14.9

FIGURE II-2

ORANGE AND ROCKLAND UTILITIES, INC
1977 AQUATIC ECOLOGY STUDIES

GENERAL PLAN OF CIRCULATING WATER SYSTEM

BOWLINE POINT GENERATING STATION — 1977



data for Bowline Unit 1 and third-year preoperational data for Bowline Unit 2 (LMS 1974). Results of data collected during 1974 (LMS 1975) represent second-year operational data for Bowline Unit 1 and first-year operational data for Bowline Unit 2. Data collected during 1975 (LMS 1976) and 1976 (LMS 1977) represent the second and third year operational data for the Bowline Point Generating Station. The present report continues these studies and provides an additional year of operational data for Bowline Units 1 and 2.

B. OBJECTIVES

The analyses in this report are based on cooling system biological entrainment[a] and impingement[b] data, and on river biological data collected from the vicinity of the Bowline Point plant (between 55-68 km) since 1971.

The experimental design, sampling methodology and analytical aspects of these extensive efforts have been examined repeatedly and modified as needed in the interest of achieving the optimal combination of high quality and continuity in the data base obtained from one year to the next. In particular, an extraordinary amount of research and development effort expended during the past six years has contributed many innovative improvements in entrainment and impingement sampling and analytical techniques. These state-of-the-art improvements are now in use at the Bowline Point plant.

The 1977 studies continued the programs initiated in 1971. The specific objectives of each program were as follows:

---

[a] The term "entrainment" refers to the pumping of aquatic biota through the cooling water system. Biota subject to entrainment typically include phytoplankton, microzooplankton, macrozooplankton, ichthyoplankton, and very small fish.

[b] The term "impingement" refers to the collection of larger organisms, mostly fish 3-15 cm long, on the surface of the cooling water intake screens.

1. Physicochemical Studies

Water quality was analyzed throughout the year to monitor the chemical/physical fluctuations in the estuary to which the biological community had to respond. Primary emphasis was placed on water temperature, conductivity, and dissolved oxygen concentrations, although numerous other parameters were monitored regularly.

2. Ichthyoplankton Studies

The objectives of the 1977 ichthyoplankton studies were: to determine the taxonomic composition of the ichthyoplankton community; to obtain information on seasonal variations in ichthyoplankton community composition and abundance, and length of fish larvae for selected species; to examine these variations among station locations, times of day and distribution within the water column. Special studies were performed to examine the distribution of juvenile forms of striped bass and white perch within Haverstraw Bay and to investigate the variables of net size and collection velocity on larval abundance estimates.

3. River Fish

Objectives of the 1977 river fish studies in the Bowline area of the Hudson River were: to characterize the structure of the fish community by ascertaining fish abundance and biomass as a function of space and time, and to define the population dynamics of selected species of fish by compiling information on age and growth.

4. Impinged Assemblages

Specific objectives for the 1977 program were: to define the total species composition and age structure of selected dominant species

subjected to the impingement process; to determine seasonal cycles of impingement; to estimate monthly impingement rates and to evaluate the relationship between abundances of fish impinged and corresponding abundances in the river. Special studies were performed to assess the collection efficiency of the intake traveling screens and to evaluate the feasibility of reducing impingement through deployment of a barrier net in front of the intake structure.

III. PHYSICOCHEMICAL STUDIES OF THE RECEIVING WATER BODY

The physicochemical studies conducted in the vicinity of the Bowline Point Generating Station during 1977 represent an extension of similar work performed since 1973. Their purpose was to define the physical and chemical characteristics of the Hudson River in the vicinity of Bowline Point, for use as background information in assessing and evaluating biological patterns.

A. HYDRODYNAMICS : FRESHWATER FLOW

The hydrodynamic characteristics of the Hudson River are important to the study of its aquatic ecology, particularly because of the ecosystem's sensitivity to changes in these parameters.

The magnitude of freshwater flow significantly affects such hydrodynamic characteristics as the length of salt intrusion and the overall water quality. A histogram of the 1977 monthly average freshwater flow in the Lower Hudson River (Figure III-1) was constructed using the relationship derived between the freshwater flow as measured at Green Island (Figure III-2), the most downstream USGS gage above the river's tidal influence, and the resulting freshwater flow in the Bowline vicinity (QLM 1974). Figure III-1 also shows the monthly average freshwater flows for the Lower Hudson River during 1975, 1976 and the 55-year period, 1918-1973.

B. WATER QUALITY

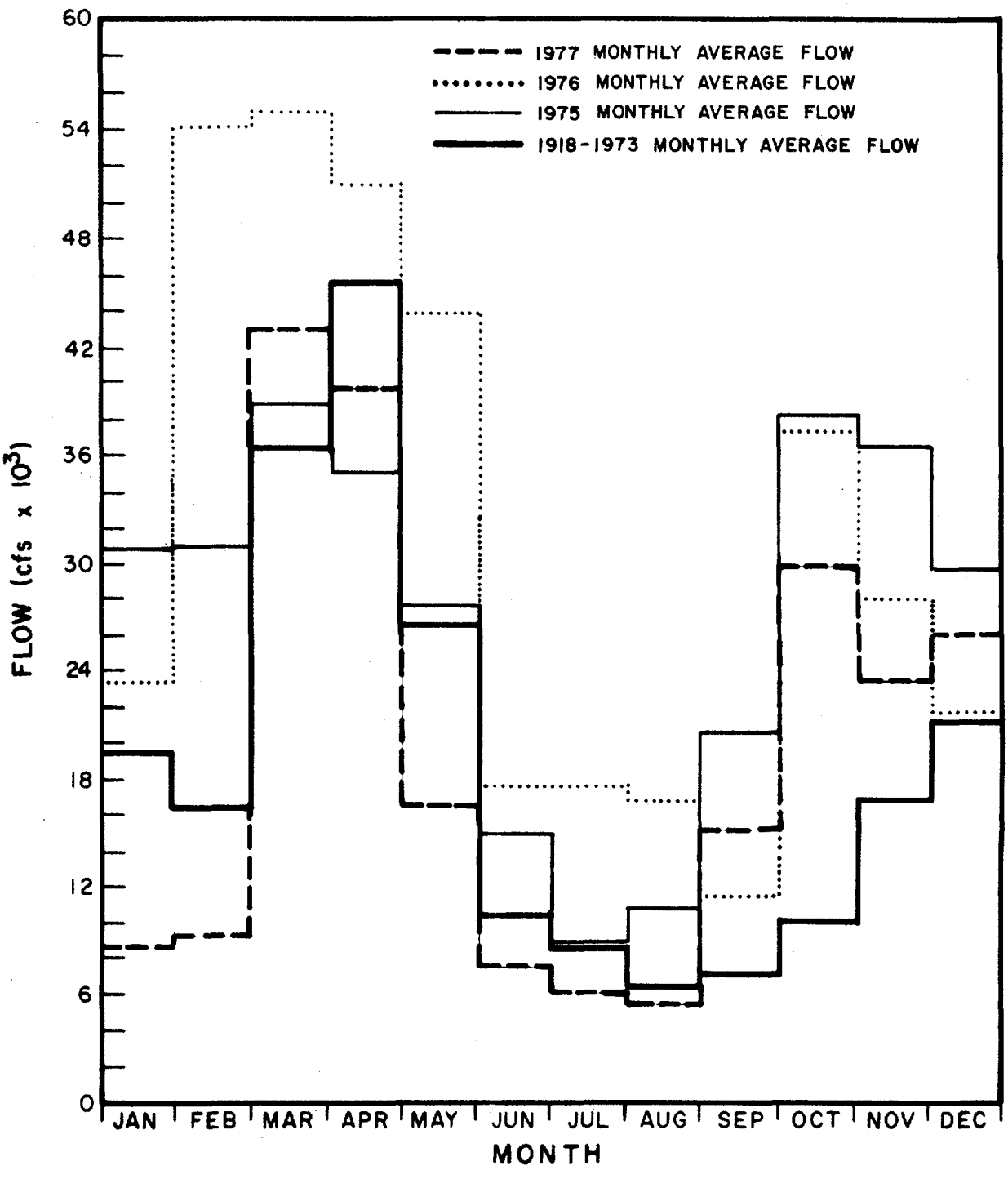
1. Introduction

This section describes the water quality in the Bowline area of the Hudson River during 1977. Twice-monthly water quality surveys were

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

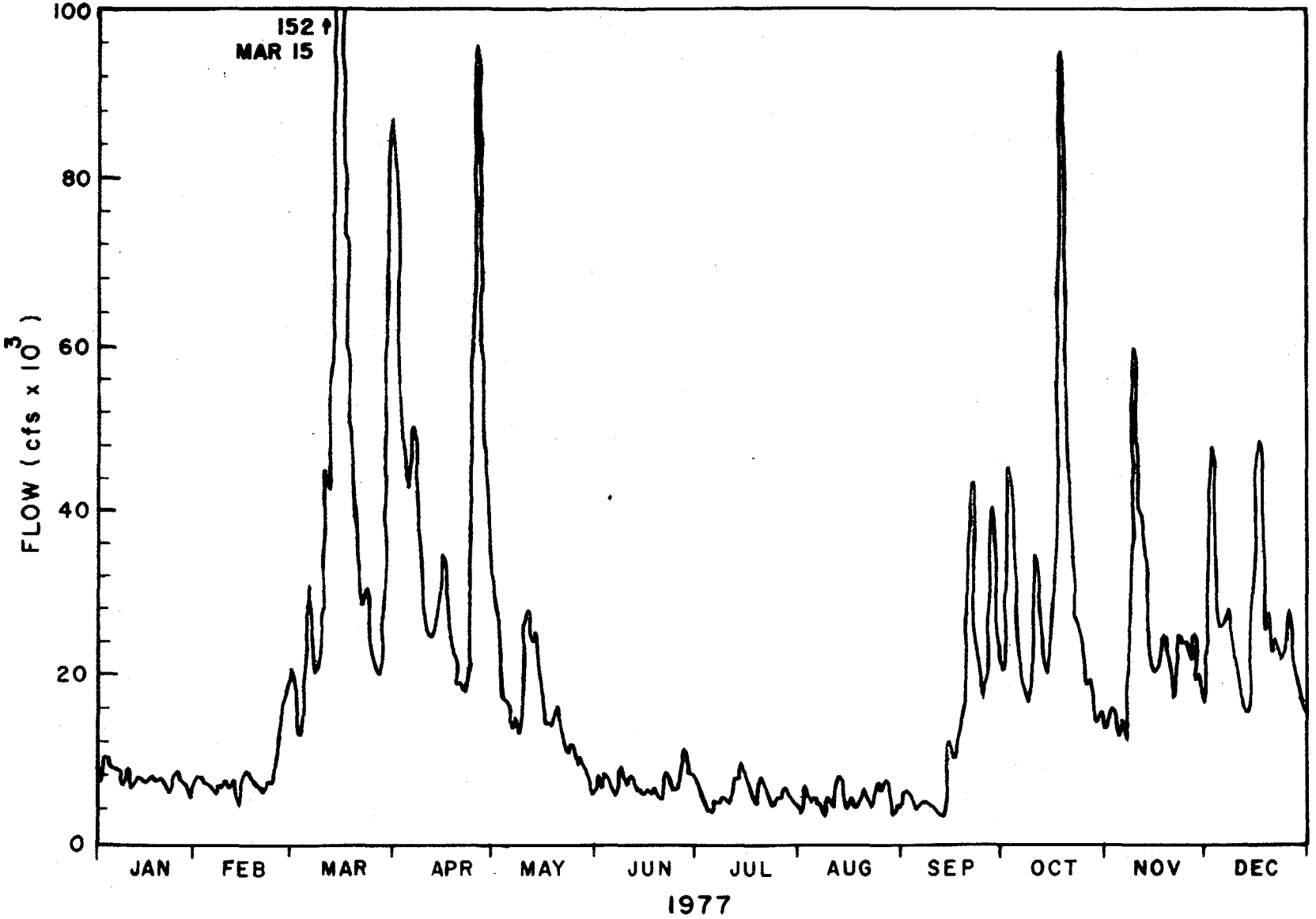
LOWER HUDSON RIVER LONG TERM MONTHLY AVERAGE FRESH WATER FLOWS



ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

HUDSON RIVER FLOW AT GREEN ISLAND *



*Preliminary USGS data

FIGURE III-2

conducted from mid-February through mid-December on the following dates (Table III-1):

TABLE III-1

WATER QUALITY SAMPLING DATES

BOWLINE VICINITY - 1977

28 MAR	15 JUL	6 OCT
14 APR	29 JUL	11 OCT
27 APR	11 AUG	20 OCT
12 MAY	25 AUG	3 NOV
24 MAY	8 SEP	17 NOV
15 JUN	22 SEP	5 DEC
29 JUN		

Parameters were selected for monitoring based upon their importance to the biological community as indicators of environmental stress. Three parameters (temperature, specific conductance, and dissolved oxygen) were also measured with each biological collection.

2. Materials and Methods

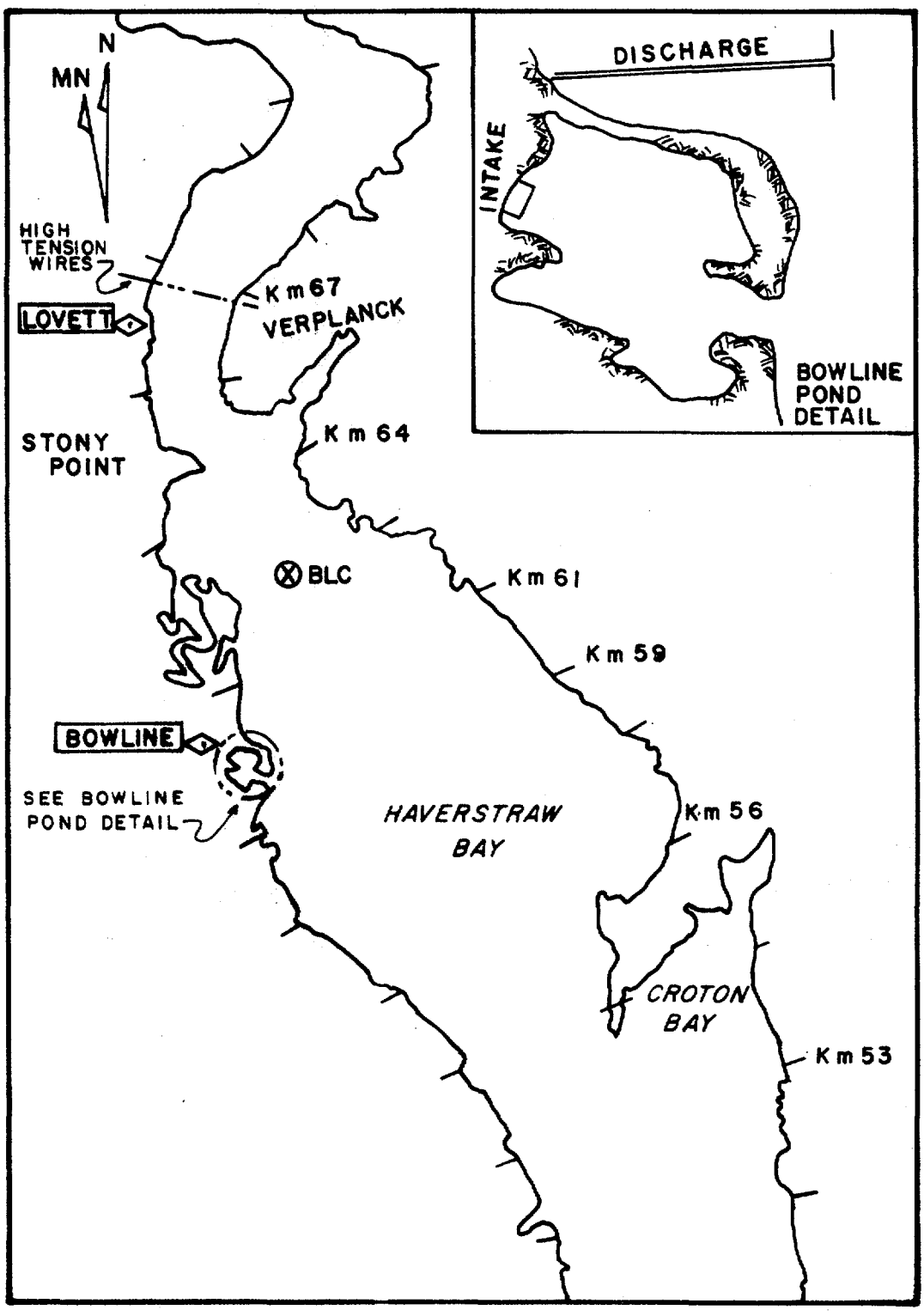
a. Field Sampling Locations

Water quality sampling was done at the Bowline/Lovett Control (BLC) station located in mid-channel off Grassy Point (63 km), midway between the Bowline Point and Lovett Generating Stations (Figure III-3). Samples were collected about 150 m north of buoy R "16" in approximately 14 m (35 ft) of water.

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WATER QUALITY SAMPLING LOCATION

BOWLINE VICINITY-1977



b. Field Collection Procedures

Samples were collected at the surface, mid-depth, and bottom with a 5-liter non-metallic Niskin bottle, and composited in a carboy. Dissolved oxygen, temperature, and specific conductance were determined from an aliquot of each sample prior to compositing. The preservation technique and sample volumes required for each parameter were as follows:

(i) Ammonia nitrogen, nitrate nitrogen: 500 ml of sample was placed in a plastic container and immediately fixed with 1 ml of concentrated H_2SO_4.

(ii) Orthophosphate: 250 ml of sample was placed in a plastic container and filtered immediately upon return to the laboratory (within two hours).

(iii) Total phosphorus, pH, silicon, total solids, turbidity: one liter of sample was placed in a plastic container and cooled to 4 C (pH was measured within four hours)

(iv) Dissolved oxygen: 300 ml of sample was collected in a standard DO bottle, fixed immediately with manganese sulfate and alkali-iodide-azide reagent (azide modification: U.S. EPA 1974), cooled to 4 C, and transported to the laboratory.

c. Laboratory Procedures

All samples were analyzed within the recommended EPA holding times (U.S. EPA 1974). The parameters measured, the methods utilized, and their respective detection limits are outlined in Table III-2.

TABLE III-2

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

METHODS UTILIZED AND DETECTION LIMITS
OF WATER QUALITY PARAMETERS

BOWLINE VICINITY - 1977

PARAMETER	METHOD UTILIZED	DETECTION LIMIT
AMMONIA-NITROGEN (NH_3)	EPA 1974, p. 169	0.03 mg/l
NITRATE NITROGEN (NO_3)	EPA 1974, p. 197	0.1 mg/l
OXYGEN-DISSOLVED (DO)	EPA 1974, p. 56	0.1 mg/l
pH	SM 1975, p. 460	0.1 pH unit
PHOSPHORUS; ORTHO, TOTAL	EPA 1974, p. 249	0.01 mg/l
SILICON	Atomic Absorption	0.5 mg/l
SOLIDS, TOTAL (TS)	EPA 1974, p. 270	1 mg/l
SPECIFIC CONDUCTANCE	EPA 1974, p. 275	10 µmhos
TURBIDITY	EPA 1974, p. 295	1 FTU

3. Results and Discussion

a. Temperature

When all the river temperature data collected in the Bowline vicinity through 1977 are graphed (Figure III-4), this curve manifests a well defined sinusoidal trend.

b. Dissolved Oxygen

All the dissolved oxygen (DO) data collected in the Bowline/ Lovett vicinity throughout 1977 were graphed (Figure III-5), showing a sinusoidal function similar to the temperature graph; however, DO values are approximately 180 degrees out of phase with temperature, so that maximum DO levels correspond to minimum temperatures and vice-versa (mirror image).

Minimum DO concentrations of less than 5.0 mg/l were recorded in mid-August coincident with temperatures of 27 C (Table III-3).

c. Specific Conductance

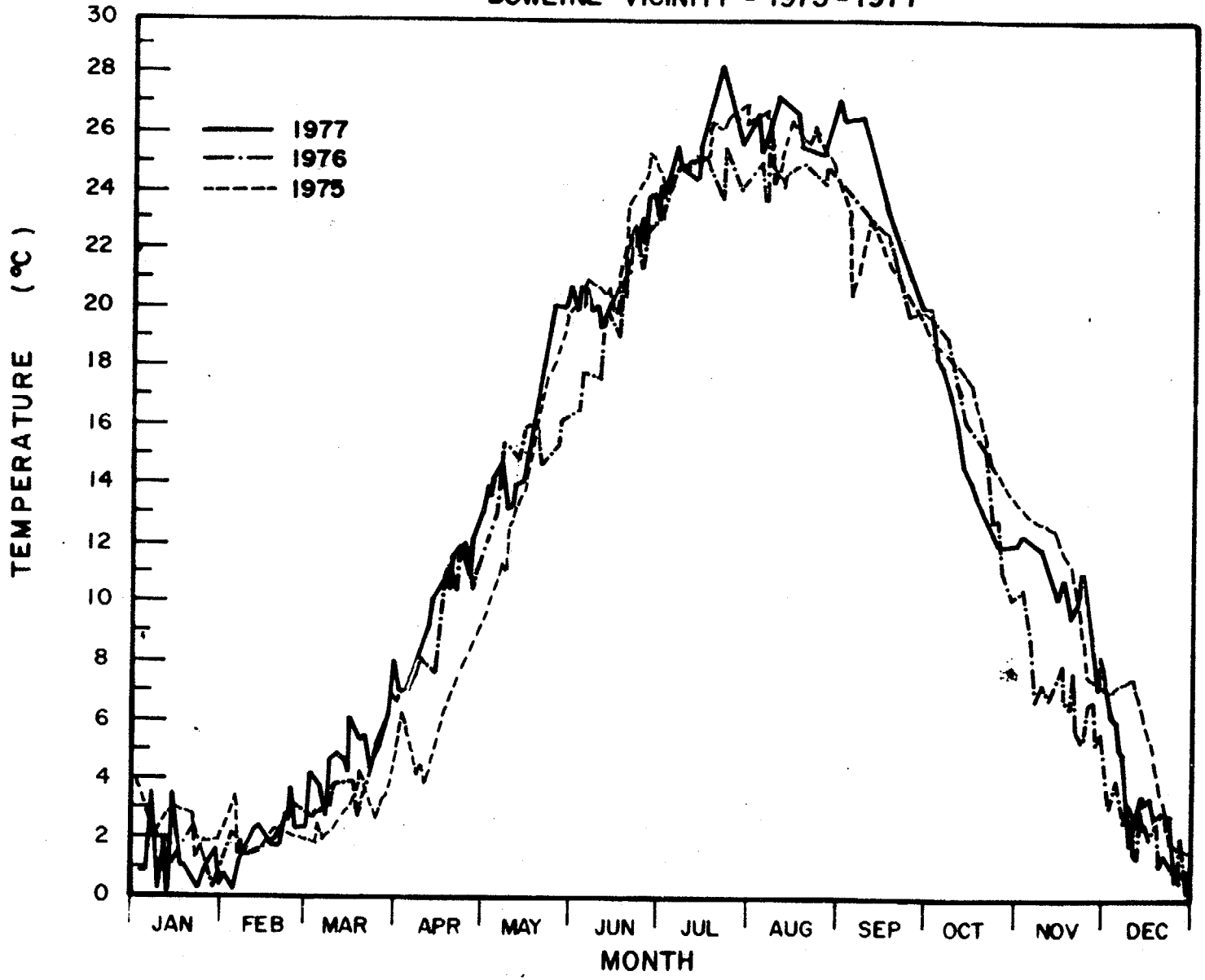
A graph (Figure III-6) of the daily average specific conductance compiled from all the river surveys in the Bowline/Lovett vicinity shows that the relationship between specific conductance and freshwater flow (Figure III-2) was fairly well defined. This was especially true during the summer months, when a low freshwater flow enabled salt to intrude upstream, yielding correspondingly higher conductivity.

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN WATER TEMPERATURE

BOWLINE VICINITY - 1975 - 1977



MEAN OF SURFACE, MID-DEPTH AND BOTTOM; MEAN OF ALL STATIONS

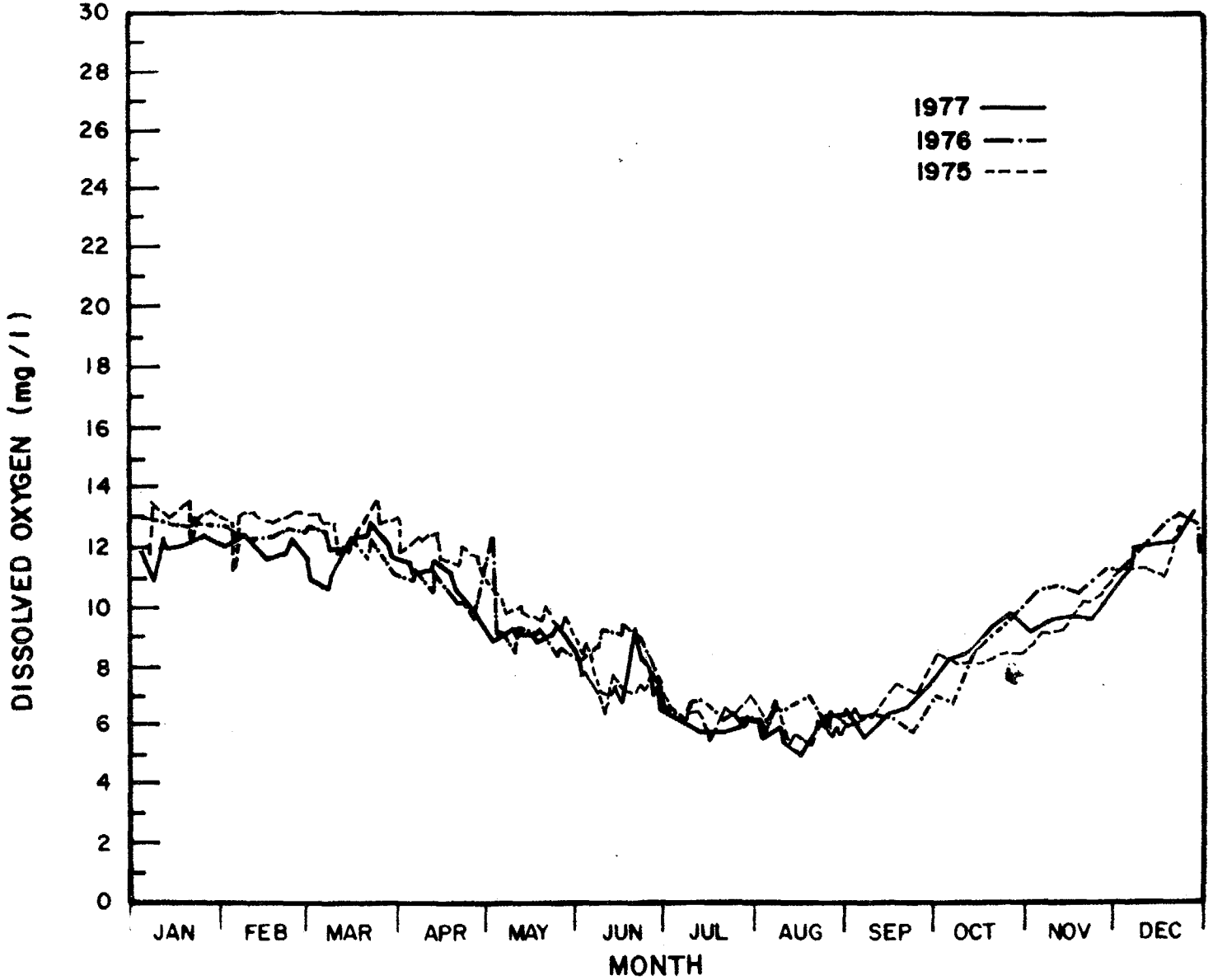
FIGURE III-

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN CONCENTRATIONS OF DISSOLVED OXYGEN

BOWLINE VICINITY - 1975-1977



MEAN OF SURFACE, MID-DEPTH AND BOTTOM; MEAN OF ALL STATIONS

FIGURE III-5

TABLE III-3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WATER QUALITY VALUES AT STATION BLC

BOWLINE VICINITY - 1977

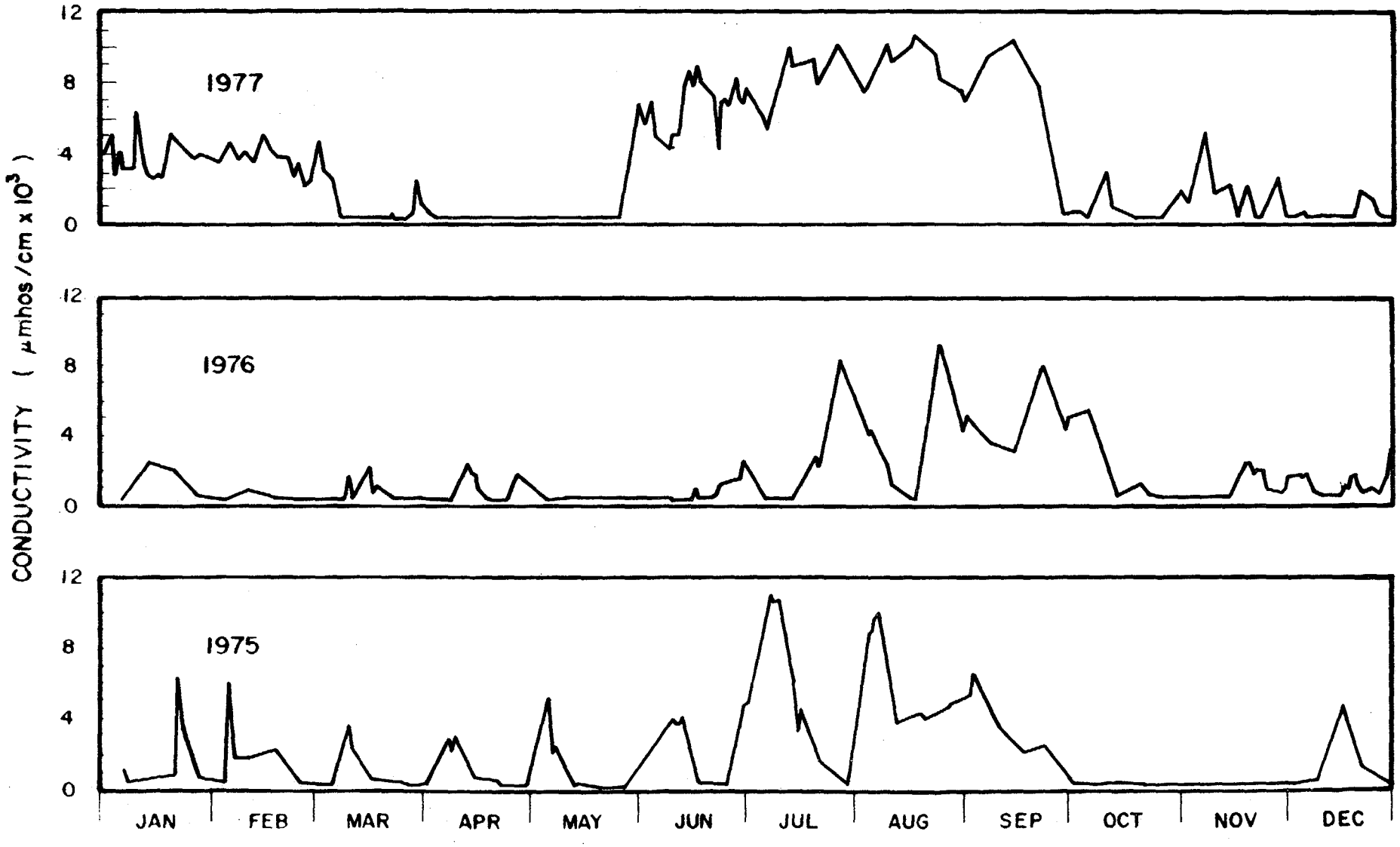
		COLLECTION DATES																	
PARAMETERS	UNITS	28 MAR	14 APR	27 APR	12 MAY	24 MAY	15 JUN	29 JUN	15 JUL	29 JUL	11 AUG	25 AUG	8 SEP	22 SEP	6 OCT	11 OCT	20 OCT	3 NOV	17 NOV	5 DEC
Temperature*	C	4.3	8.7	11.7	13.5	19.0	21.1	23.5	24.7	24.4	27.0	24.1	25.1	22.5	17.7	15.8	12.2	12.9	10.4	5.4
Dissolved Oxygen*	mg/l	12.2	11.4	9.6	9.4	8.9	6.7	6.6	4.9	6.0	4.8	6.4	4.9	6.4	7.9	7.6	9.3	8.1	9.5	10.8
Specific Conductance*	µmho/cm @ 25 C	1648	118	139	132	150	7200	7800	7066	8500	9500	10066	12533	5633	218	2143	170	1217	150	130
pH		6.6	6.4	6.9	7.4	7.5	7.3	6.8	7.3	7.1	7.2	6.4	6.7	6.8	6.9	7.3	7.6	6.9	7.4	7.5
Turbidity	FTU	18	24	10	10	15	8	11	9	10	11	12	8	12	27	45	16	16	30	16
Total phosphorus	mg/l	0.11	0.04	0.06	0.07	0.04	0.08	0.08	0.10	0.09	0.11	0.14	NA	NA	0.04	0.19	0.05	0.06	0.06	0.06
Ortho-phosphate	mg/l	0.03	0.02	0.01	0.04	0.01	0.04	<0.03	0.06	0.06	0.07	0.07	0.07	0.06	0.03	0.03	0.03	0.04	0.03	0.03
Nitrate-nitrogen	mg/l	0.80	0.70	0.83	0.82	0.65	0.80	0.52	0.46	1.11	0.76	0.86	0.85	0.94	1.00	0.71	0.17	0.80	0.62	0.54
Ammonia-nitrogen	mg/l	0.14	0.04	0.10	0.21	0.02	0.04	0.09	0.18	0.09	0.25	0.31	0.20	0.07	0.01	0.09	0.33	0.67	0.11	0.06
Silicon	mg/l	2.8	1.9	2.1	1.7	1.4	<0.5	<0.5	<0.5	<0.5	0.6	0.5	<0.5	<0.5	0.9	1.2	7.5	2.2	1.9	2.9
Total Solids	mg/l	2026	162	134	135	134	4028	5057	5264	6734	NA	5480	7570	3874	183	1561	128	3524	162	111

NA = Not available
*Average of surface, mid, and bottom - other values reflect composite of all depths

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN CONDUCTIVITY VALUES

BOWLINE VICINITY 1975 - 1977



MEAN OF UPPER, MID-DEPTH & LOWER; MEAN OF ALL STATIONS

FIGURE III-

d. pH; Turbidity, and Total Solids

The pH values observed in the Bowline/Lovett vicinity were relatively constant around neutrality (Table III-3) with an overall range of 6.4 to 7.6 and a yearly mean of 7.1.

The turbidity values were consistently low, ranging from 8 to 45 FTU with a yearly mean of only 16 (Table III-3), which is low for a system characteristically high in suspended solids.

The total solids concentrations observed in the Bowline/Lovett vicinity (Table III-3) exhibited the same patterns demonstrated by the specific conductance: wide variation over the year contingent upon the freshwater flow and concomitant saltwater intrusion.

e. Nutrients

The nitrogen, as nitrate, ranged from 0.17 to 1.11 mg/l with an average of about 0.73 mg/l (Table III-3), close to the mean concentrations of 0.68 and 0.59 mg/l recorded in 1976 and 1975 respectively (LMS 1977, LMS 1976). The phosphorus, as the soluble orthophosphate form, ranged from 0.01 to 0.07 mg/l with an average of 0.04 mg/l (Table III-3), also close to the mean concentration of 0.05 and 0.06 mg/l recorded in 1976 and 1975 respectively (LMS 1977, LMS 1976). The silicon concentrations for 1977 ranged from less than 0.5 to 7.5 mg/l with an average of less than 1.6 mg/l (Table III-3), substantially less than the recorded 2.5 mg/l average concentration for 1976 (LMS 1977).

Although the low concentrations of silicon throughout the summer may have limited some algal growth (specifically the Bacillariophyceae [diatoms]), the concentrations of nitrogen and phosphorus were higher than the recognized limits for eutrophic

waters (0.3 mg/l for nitrogen and 0.015 mg/l phosphorus) (Sawyer 1966). Therefore, the river water in the Bowline vicinity most likely contained macronutrients sufficient for extensive algal growth.

IV. ICHTHYOPLANKTON STUDIES

Ichthyoplankton is defined as the meroplanktonic fish egg and larvae community and includes, for the purpose of entrainment impact assessment, eggs, yolk-sac larvae, post-yolk-sac larvae, and the incidental catch of juvenile forms collected by a 571 micron mesh plankton net.

The studies were designed to evaluate the ichthyoplankton community structure and growth, spawning periodicity, spatial and temporal distributions, and the possible effect of plant operation upon these components.

The early life histories of striped bass, white perch, Atlantic tomcod, and Alosa spp. have been addressed by McFadden (1977) and are not repeated in this report. The early life history of bay anchovy was addressed in O&R (1977).

A. RIVER ICHTHYOPLANKTON

1. Introduction

River ichthyoplankton sampling was performed in order to assess the larval fish populations present in the vicinity of the Bowline Point plant and thus subject to entrainment. Three stations aligned across the river provided a cross-sectional picture that was evaluated for spatial and temporal patterns exhibited by the ichthyoplankton assemblage. This information was used to compare local phenomena occurring in the Bowline vicinity to those at other areas within the river, as documented in concurrent river-wide ichthyoplankton studies. A special study was employed in July to assess the distribution of juvenile white perch and striped bass in additional areas of the Bowline Point vicinity. Different gear types were utilized to sample various habitats.

The format of this report is intended to be compatible with previous work, particularly Orange and Rockland Utilities, Inc. (1977), which summarizes the studies performed from 1973 through 1976.

2. Materials and Methods

Studies are continuing to provide data to further describe the trends documented in this and previous reports (QLM 1974; LMS 1975, 1976, 1977; O&R 1977). Procedures followed in studies prior to 1977 were described in detail in O&R (1977), and will not be repeated in this report. In this section, the procedures utilized throughout 1977 are documented.

a. River Sampling Procedures

(i) Nearfield Larval Abundance

Ichthyoplankton collections were conducted in the Bowline vicinity weekly from 24 February through 30 August 1977. Sampling dates for ichthyoplankton collections are presented in Table IV-1 while the sampling locations for ichthyoplankton are shown in Figure IV-1 and are as follows:

Bowline Channel (BCH): located in the channel east of the Bowline Pond inlet in 12.2 m (40 ft) of water. Collections were made at the surface, mid and bottom depths.

Bowline East (BE): located on the east side of the river adjacent to the Bowline Pond inlet in 3.0 m (10 ft) of water. Collections were made at the surface and bottom.

TABLE IV-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON SAMPLING PROGRAM

BOWLINE VICINITY - 1977

STATION (SITE CODE)	SAMPLE DEPTH (m)	SAMPLING DATES																					
		24 FEB		1 MAR		8 MAR		15 MAR		22-23 MAR		29 MAR		5 APR		12 APR		19 APR		26 APR		3 MAY	
		D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N
BW	0	X	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(135)	3.0	X	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6.1	X	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BCH	0	X	NS	NS	NS	X	X	X	X	NA	NS	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(136)	6.1	X	NS	NS	NS	X	X	X	X	NA	NS	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12.2	X	NS	NS	NS	X	X	X	X	NA	NS	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BE	0	X	NS	NS	NS	X	X	X	X	NA	NS	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(137)	3.0	X	NS	NS	NS	X	X	X	X	NA	NS	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BPL	0	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(133)	3.0	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BPS	0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(134)	3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

STATION (SITE CODE)	SAMPLE DEPTH (m)	SAMPLING DATES																					
		10 MAY		16 MAY		23 MAY		31 MAY-1 JUN		2-3 JUN		6-7 JUN		8-9 JUN		13-14 JUN		16-17 JUN		20-21 JUN		23-24 JUN	
		D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N
BW	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(135)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BCH	0	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(136)	6.1	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	12.2	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BE	0	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(137)	3.0	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BPL	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(133)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BPS	0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X
(134)	3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	X	X	X	X	X	X	X	X	X	X
	8.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	X	NS	X	NS	X	X	X	X	X	X

TABLE IV-1 (CONTINUED)

ICHTHYOPLANKTON SAMPLING PROGRAM

STATION (SITE CODE)	SAMPLE DEPTH (m)	SAMPLING DATES																					
		27-28 JUN		30 JUN-1 JUL		5-6 JUL		12-13 JUL		19-20 JUL		26-27 JUL		2 AUG		9 AUG		16 AUG		23 AUG		30 AUG	
		D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N	D	N
BW	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(135)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BCH	0	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(136)	6.1	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12.2	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BE	0	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(137)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BPL	0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(133)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BPS	0	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
(134)	3.0	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8.5	X	X	X	X	X	X	X	X	X	X	X	X	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

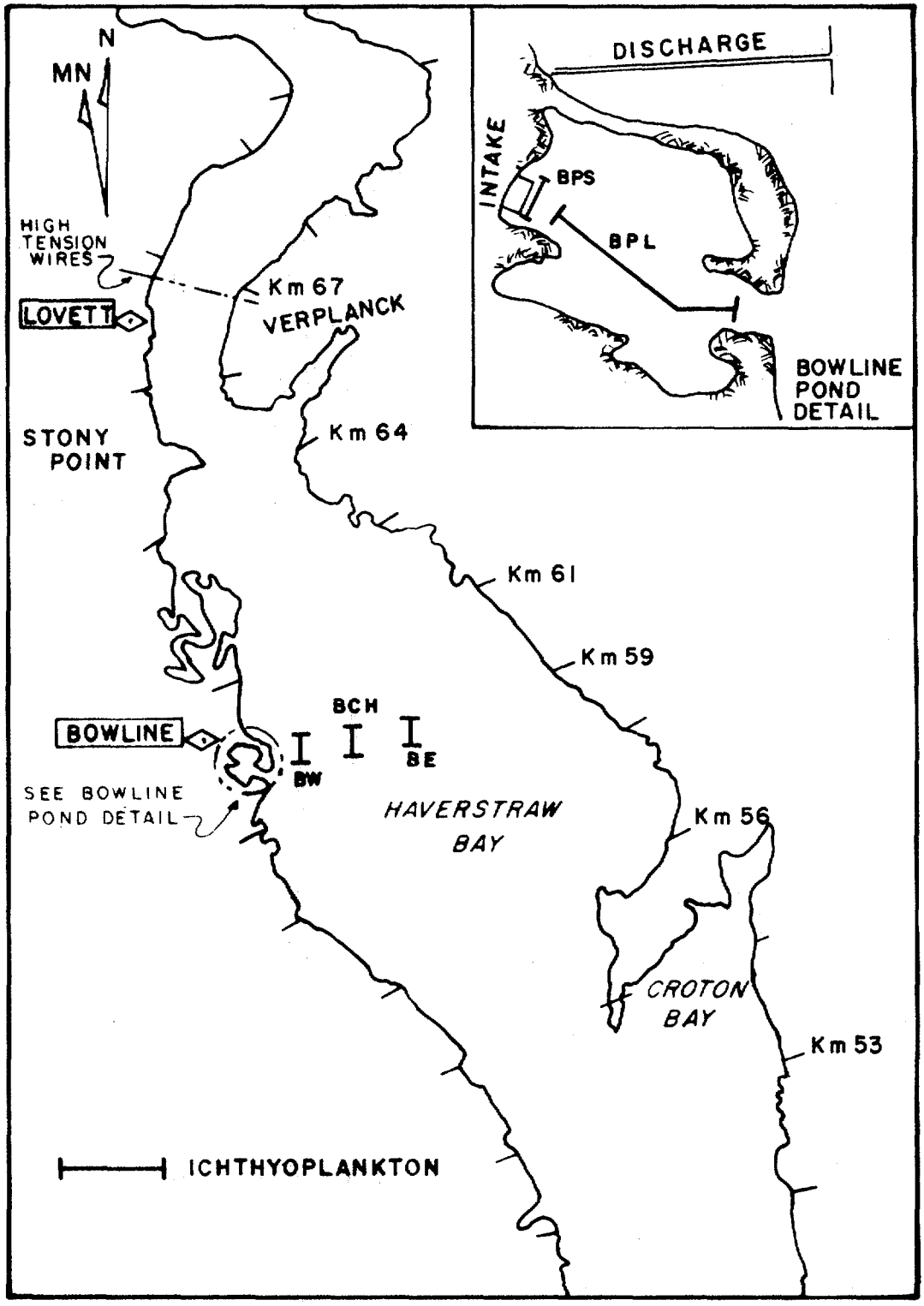
X = One sample collected and analyzed
D = Day
N = Night
NS = Not sampled
NA = Not analyzed

FIGURE IV-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON SAMPLING LOCATIONS

BOWLINE VICINITY - 1977



Bowline West (BW): located directly south of the oil dock and east of the pond inlet in 6.1 m (20 ft) of water. Collections were made at the surface, mid, and bottom depths.

Bowline Pond Long (BPL): towed in Bowline Pond from in front of the intake to the pond's inlet. Collections were made at the surface and mid depths.

Bowline Pond Short (BPS): towed in Bowline Pond across the front of the intake in 8.5 m (28 ft) of water. Collections were made at the surface, mid and bottom depths. (This site was sampled only from 8 June through 26 July).

Sampling intensity varied according to the larval density of Atlantic tomcod and Morone spp. During periods of high tomcod abundance, (24 February-15 March 1977) all stations were sampled once weekly (Table IV-1). During periods of high Morone spp. abundance (31 May-1 July 1977), all stations, except the BPS station, which was added on 8 June 1977, were sampled twice a week (Table IV-1). During the periods when neither tomcod nor Morone spp. were dominant (5 March-31 May and 2 August-30 August) the sampling program was performed weekly at two stations, BW and BPL. Each survey consisted of sampling once during the day and once during the night.

All ichthyoplankton samples were collected with a 1.0-meter diameter Hensen net with 571 micron mesh netting and a TSK meter center mounted in the mouth of each net. An epibenthic sled with a 1.0-meter plankton net was used for all bottom tows.

Except for the BPL and BPS tows, which were conducted over a specified distance, all samples were collected for a duration of 5 minutes timed with a stopwatch. The meters were read before and after each tow; any surface or mid-depth tow for which the number of revolutions was less than 1400 or greater than 2000 was repeated and the first sample discarded. For sled tows an upper limit of 2400 revolutions was used.

All TSK meters were maintained and checked at the warehouse prior to each survey. Factory calibrations were used for calculations; meters not functioning under factory specifications were not used and were returned for repairs. A specially designed air calibration apparatus was employed to check the meters prior to their deployment in the field. The procedure was to place the meters in a modified wind tunnel for a specific period of time, during which meter revolutions had to fall within acceptable limits.

Samples were preserved in the field with 5-6% buffered formalin and transported to the laboratory.

(ii) Special Juvenile Study

The special juvenile study was conducted in the Bowline vicinity over a three-week period from 5 July through 20 July 1977. This special study was performed in conjunction with the regularly scheduled ichthyoplankton sampling. Sampling dates are presented in Table IV-2, while the sampling locations, shown in Figure IV-2, are as follows:

TABLE IV-2

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SAMPLING PROGRAM FOR THE JUVENILE
MORONE SPP. SPECIAL STUDY

BOWLINE VICINITY - 1977

STATION	SAMPLE DEPTH	COLLECTION METHOD	5-6 JUL DAY	5-6 JUL NIGHT	12-13 JUL DAY	12-13 JUL NIGHT	19-20 JUL DAY	19-20 JUL NIGHT
BPNEC	S	OTTER TRAWL			X	X		
BPSC	S	OTTER TRAWL			X	X		
BSW	S	OTTER TRAWL			X	X		
BB	S	OTTER TRAWL			X	X		
BNE	S	OTTER TRAWL			X	X		
BSE	S	OTTER TRAWL			X	X		
BPS	S	OTTER TRAWL		X	X	X		X
	S	1 M HENSEN NET	X	X	X	X	X	X
	B	OTTER TRAWL		X	X	X		X
	B	1 M HENSEN NET	X	X	X	X	X	X
BW	S	OTTER TRAWL			X	X		
	S	1 M HENSEN NET	X	X	X	X	X	X
	B	OTTER TRAWL		X	X	X		X
	B	1 M HENSEN NET	X	X	X	X	X	X
BCH	S	OTTER TRAWL		X				
	S	1 M HENSEN NET	X	X	X	X	X	X
	B	OTTER TRAWL		X	X	X		X
	B	1 M HENSEN NET	X	X	X	X	X	X
BE	S	OTTER TRAWL						X
	S	1 M HENSEN NET	X	X	X	X	X	X
	B	OTTER TRAWL		X	X	X		X
	B	1 M HENSEN NET	X	X	X	X	X	X
BBS	S	SEINE			X	X		
BPN	S	SEINE			X	X		
CPS	S	SEINE			X	X		

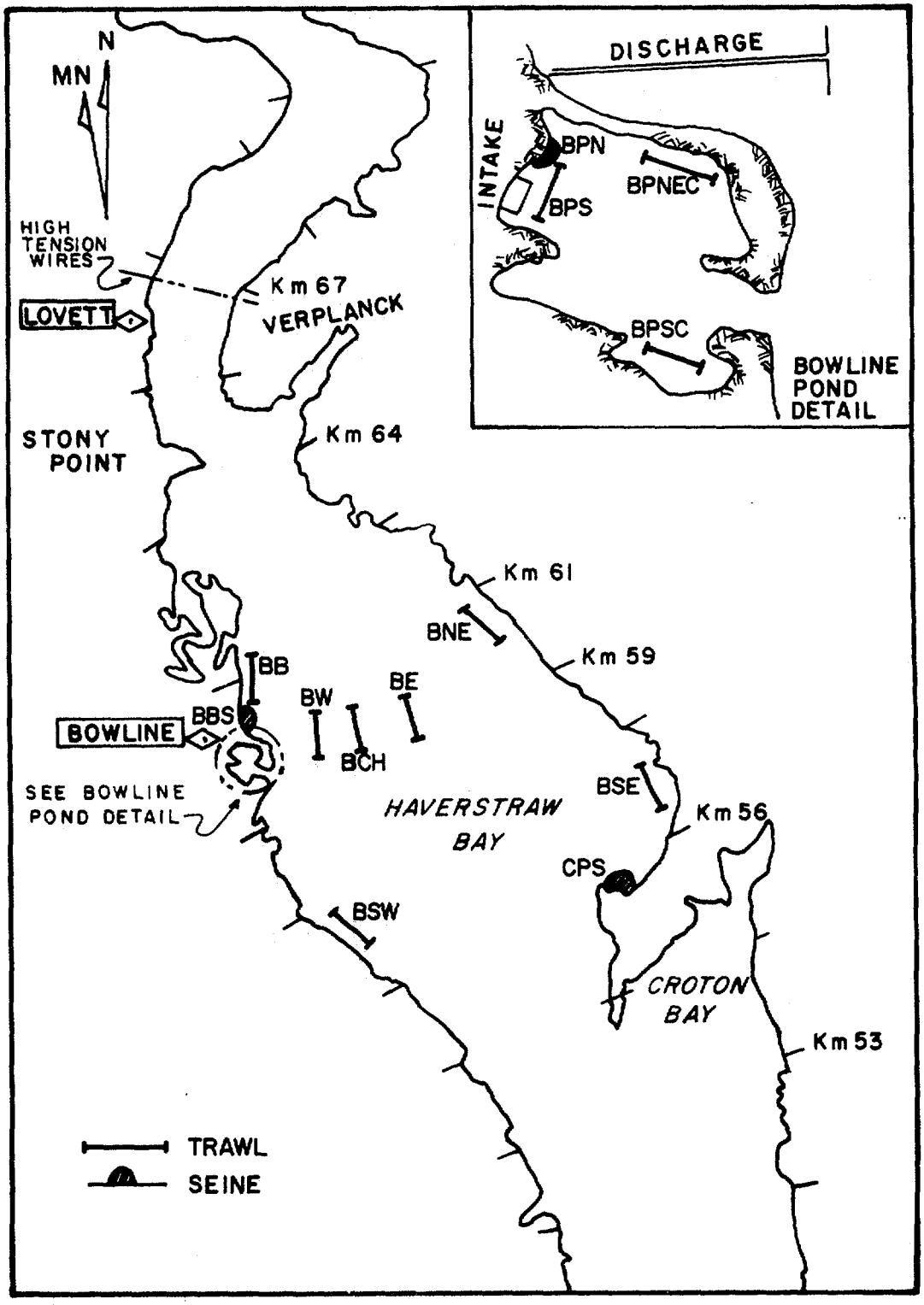
S - Surface
B - Bottom

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

SAMPLING LOCATIONS FOR THE JUVENILE MORONE SPP. SPECIAL STUDY

BOWLINE VICINITY - 1977



Trawls

Bowline Pond Northeast Cove (BPNEC): located in the northeast cove of Bowline Pond in approximately 3.0 m (10 ft) of water. Collections were made at the surface.

Bowline Pond South Cove (BPSC): located in the southeastern cove of Bowline Pond in approximately 4.6 m (15 ft) of water. Collections were made at the surface.

Bowline South West (BSW): located on the west side of the river approximately 2.4 km south of the Bowline Pond inlet in 3.0 m (10 ft) of water. Collections were made at the surface.

Bowline Bay (BB): located on the west side of the river just north of the Bowline Point oil dock in 3.0 m (10 ft) of water. Collections were made at the surface.

Bowline Northeast (BNE): located on the east side of the river at 61 km in 3.0 m (10 ft) of water. Collections were made at the surface.

Bowline Southeast (BSE): located on the east side of the river at 56.8 km, just north of Croton Point, in 3.0 m (10 ft) of water. Collections were made at the surface.

Bowline Pond Short (BPS), Bowline West (BW), Bowline channel (BCH), and Bowline East (BE): The same locations were used as were previously described for the nearfield ichthyoplankton abundance sampling program. Collections were made at the surface and bottom depths.

Seines

Bowline Bay South (BBS): located on the northeast side of a small sand bar off Minisceongo Creek, just west of the submerged debris.

Bowline Pond North (BPN): located on the point approximately 120 m (400 ft) north of the intake structure.

Croton Point Seine (CPS): located on the northeastern shore of Croton Point.

Sampling consisted of three surveys, two reduced efforts of night trawls done in conjunction with the regularly scheduled ichthyoplankton survey and a third intensive effort of day and night trawl and seine collections in conjunction with the regular ichthyoplankton sampling.

Although the gear was modified slightly to facilitate sampling the juvenile fish community, the gear and deployment were essentially the same as were used in previous river fish studies throughout 1974-1977. The deployment procedures were completely documented in the 1974 annual report (LMS 1975) but are briefly described here to explain any modifications.

Trawls were conducted with a 9.1 m (30 ft) otter trawl rigged with weighted doors. The trawls were constructed of a 5.1 cm (2 inch) stretch mesh body and a 3.8 cm (1.5 inch) stretch mesh cod end rigged with a 0.64 cm (0.25 inch) stretch mesh liner. Tows were timed from the instant the trawl lines became taut; at this time the boat speed was

increased to 150 cm/second (5 fps), determined with a General Oceanics meter with on-deck readout suspended from the side of the boat at the surface. A TSK flowmeter was mounted in the net to approximate flow through the net. Distance traveled over the bottom was also calculated by dividing the time required to cover a premeasured standard distance into the total time of the collection and multiplying by the standard distance. Trawls were made as close to shore as possible, and predominantly at the surface due to the obstructions encountered on the bottom along the shoal areas.

Seining was conducted from a small boat with a 15.2 x 2.4 m (50 x 8 ft) bag seine (2.4 x 2.4 x 2.4 m bag) of 0.32 cm (0.125 inch) square mesh netting.

Samples were preserved in the field with 5-6% buffered formalin and transported to the laboratory.

b. Laboratory Analysis

All fish eggs and larvae were sorted from each sample and total eggs were counted. Morone spp. eggs were identified and abundance was determined for each species. All larvae were identified to the lowest possible taxonomic level and counted at 40 magnifications under a dissecting microscope. Abundance was determined for each species, and the lengths (measured to the nearest 0.1 mm using an ocular micrometer) and life stage codes of 60 white perch and striped bass per sample, and 30 Atlantic tomcod, bay anchovy, and Alosa spp. larvae per sample, were measured. When larvae were abundant, samples were subdivided with a Folsom Plankton Splitter after removal of all Morone spp. larvae.

Abundance, expressed as eggs or larvae/1000 m^3, was calculated according to the following formula:

$$X = 1000 \frac{(TC)\ \frac{1}{F}}{VS}$$

where: TC = total of a species counted
F = fraction analyzed
X = number of larvae or eggs/1000 m^3
VS = volume sampled during net tow (m^3)

The sample volume was calculated differently depending upon gear type.

1 M HENSEN NET:

m^3 = (number of revolutions on TSK meter) x (0.1178 m^3/rev)

LINED OTTER TRAWL:

m^3 = (number of revolutions on TSK meter) x (0.15 m/rev) x 2.12 m^2

SEINE:

m^3 = (mean depth at site) x (182.4 m^2)

3. Results and Discussion

a. Annual Trends (1977)

(i) Species Assemblage

The ichthyoplanktonic organisms identified in samples collected during 1977 are listed in Table IV-3. The species identified during 1977 are essentially the same as those collected during previous studies (O&R 1977). The Bowline Point area continued to serve as a nursery area for white perch, striped bass, Atlantic tomcod, the Alosa spp., American eel, and rainbow smelt.

TABLE IV-3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON SPECIES INVENTORY

BOWLINE VICINITY - 1977

COMMON NAME	SCIENTIFIC NAME
	UID Ammodytidae
	UID Atherinidae
	UID Centrarchidae
	UID Clupeidae
	UID Cyprinidae
	UID Pleuronectidae
	UID Syngnathidae
	Alosa spp.
	Morone spp.
	Notropis spp.
	Paralichthys sp.
	Menidia spp.
	Fundulus spp.
	Lepomis spp.
	Syngnathus sp.
American eel	*Anguilla rostrata*
Atlantic silverside	*Menidia menidia*
Atlantic tomcod	*Microgadus tomcod*
Banded killifish	*Fundulus diaphanus*
Bay anchovy	*Anchoa mitchilli*
Bluefish	*Pomatomus saltatrix*
Hogchoker	*Trinectes maculatus*
Largemouth bass	*Micropterus salmoides*
Northern pipefish	*Syngnathus fuscus*
Rainbow smelt	*Osmerus mordax*
Redbreast sunfish	*Lepomis auritus*
Rough silverside	*Membras martinica*
Striped bass	*Morone saxatilis*
Tessellated darter	*Etheostoma olmstedi*
Tidewater silverside	*Menidia beryllina*
Weakfish	*Cynoscion regalis*
White perch	*Morone americana*
Winter flounder	*Pseudopleuronectes americanus*
Yellow perch	*Perca flavescens*

(ii) Temporal Distribution

No Atlantic tomcod eggs were collected in the Bowline Point vicinity, due primarily to the inability to sample the river during the winter months and the adhesive demersal nature of the eggs.

Egg abundance for the Morone spp. throughout 1977 was very low. White perch eggs were recorded in the area only from 23 May through 6 June, and at low abundances. Striped bass eggs were collected in the Bowline Point vicinity approximately three weeks earlier (3 May through 23 May), also in low numbers (Table IV-4).

No Alosa spp. eggs were collected in the Bowline Point vicinity throughout 1977. However, this is not surprising since the primary Alosa spp. spawning areas are further north in the freshwater areas of the Hudson River (O&R 1977).

Bay anchovy eggs were collected as early as 31 May, with maximum egg concentrations occurring at Station BCH on the 16 June and 12 July surveys (Table IV-4).

Atlantic tomcod larvae were present on the year's first survey date (24 February), suggesting their presence in the area for some time prior to the initiation of the 1977 program. High concentrations of tomcod larvae remained in the area throughout March, but their numbers declined rapidly in April, as demonstrated at the monitoring station (BW) (Table IV-5). Atlantic tomcod juveniles were caught throughout the spring and summer as occasional transients through Haverstraw Bay, most likely in response to movements of the salt front.

TABLE IV-4

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

FISH EGG ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE EAST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL EGG	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
08 MAR	0	0	0	0	0	0	0	0
15 MAR	1	0	0	0	0	0	0	1
29 MAR	0	0	0	0	0	0	0	0
MONTHLY MEAN	.3	.0	.0	.0	.0	.0	.0	.3
31 MAY	7	0	0	0	0	0	7	0
MONTHLY MEAN	7.0	.0	.0	.0	.0	.0	7.0	.0
01 JUN	8	0	0	0	0	0	8	0
02 JUN	1	0	1	0	0	0	0	0
06 JUN	38	0	35	0	0	0	2	1
08 JUN	1	0	0	0	0	0	1	0
13 JUN	12	0	0	0	0	0	12	0
16 JUN	93	0	0	0	0	0	93	0
20 JUN	61	0	0	0	0	0	61	0
23 JUN	0	0	0	0	0	0	0	0
27 JUN	220	0	0	0	0	0	220	0
30 JUN	0	0	0	0	0	0	0	0
MONTHLY MEAN	43.4	.0	3.6	.0	.0	.0	39.7	.1
05 JUL	0	0	0	0	0	0	0	0
12 JUL	129	0	0	0	0	0	129	0
19 JUL	315	0	0	0	0	0	315	0
26 JUL	1578	0	0	0	0	0	1578	0
MONTHLY MEAN	505.5	.0	.0	.0	.0	.0	505.5	.0

TABLE IV-4 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

FISH EGG ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE CHANNEL
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL EGG	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
08 MAR	0	0	0	0	0	0	0	0
15 MAR	0	0	0	0	0	0	0	0
29 MAR	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
31 MAY	12	0	6	0	0	0	6	0
MONTHLY MEAN	12.0	.0	6.0	.0	.0	.0	6.0	.0
02 JUN	4	0	1	0	0	0	3	1
06 JUN	1	0	1	0	0	0	0	0
08 JUN	4	0	0	0	0	0	4	0
13 JUN	2191	0	0	0	0	0	2191	0
16 JUN	10847	0	0	0	0	0	10847	0
20 JUN	10	0	0	0	0	0	10	0
23 JUN	71	0	0	0	0	0	71	0
27 JUN	870	0	0	0	0	0	870	0
30 JUN	8	0	0	0	0	0	8	0
MONTHLY MEAN	1556.2	.0	.2	.0	.0	.0	1556.0	.1
05 JUL	0	0	0	0	0	0	0	0
12 JUL	18512	0	0	0	0	0	18512	0
19 JUL	296	0	0	0	0	0	296	0
26 JUL	1114	0	0	0	0	0	1114	0
MONTHLY MEAN	4980.5	.0	.0	.0	.0	.0	4980.5	.0

TABLE IV-4 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

FISH EGG ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE WEST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL EGG	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
01 MAR	0	0	0	0	0	0	0	0
08 MAR	0	0	0	0	0	0	0	0
15 MAR	0	0	0	0	0	0	0	0
22 MAR	0	0	0	0	0	0	0	0
29 MAR	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
05 APR	0	0	0	0	0	0	0	0
12 APR	0	0	0	0	0	0	0	0
19 APR	0	0	0	0	0	0	0	0
26 APR	0	0	0	0	0	0	0	0
MONTHLY MEAN	.0	.0	.0	.0	.0	.0	.0	.0
03 MAY	5	0	0	5	0	0	0	0
10 MAY	10	0	0	9	0	0	0	1
16 MAY	27	0	0	27	0	0	0	0
23 MAY	43	0	4	39	0	0	0	0
31 MAY	35	0	0	0	0	0	35	0
MONTHLY MEAN	24.0	.0	.8	16.0	.0	.0	7.0	.2
02 JUN	5	0	0	0	0	0	5	0
06 JUN	3	0	1	0	0	0	2	0
08 JUN	8	0	0	0	0	0	8	0
13 JUN	150	0	0	0	0	0	150	0
16 JUN	361	0	0	0	0	0	355	5
20 JUN	8	0	0	0	0	0	8	0
23 JUN	2	0	0	0	0	0	2	0
27 JUN	519	0	0	0	0	0	519	0
30 JUN	4	0	0	0	0	0	4	1
MONTHLY MEAN	117.8	.0	.1	.0	.0	.0	117.0	.7

TABLE IV-4 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

FISH EGG ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE WEST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL EGG	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
05 JUL	0	0	0	0	0	0	0	0
12 JUL	2837	0	0	0	0	0	2837	0
19 JUL	297	0	0	0	0	0	297	0
26 JUL	673	0	0	0	0	0	673	0
MONTHLY MEAN	951.8	.0	.0	.0	.0	.0	951.8	.0
02 AUG	45	0	0	0	0	0	45	0
09 AUG	663	0	0	0	0	0	663	0
16 AUG	1776	0	0	0	0	0	1776	1
23 AUG	0	0	0	0	0	0	0	0
30 AUG	0	0	0	0	0	0	0	0
MONTHLY MEAN	496.8	.0	.0	.0	.0	.0	496.8	.2

TABLE IV-5

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE EAST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	62	48	0	0	0	0	0	15
MONTHLY MEAN	62.0	48.0	.0	.0	.0	.0	.0	15.0
08 MAR	264	264	0	0	0	0	0	0
15 MAR	367	367	0	0	0	0	0	0
29 MAR	2026	2022	0	0	0	0	0	4
MONTHLY MEAN	885.7	884.3	.0	.0	.0	.0	.0	1.3
31 MAY	16	0	7	0	9	0	0	0
MONTHLY MEAN	16.0	.0	7.0	.0	9.0	.0	.0	.0
01 JUN	130	2	76	13	16	4	15	4
02 JUN	232	5	64	99	42	8	8	8
06 JUN	1084	15	238	774	13	17	5	24
08 JUN	912	6	339	469	27	13	17	42
13 JUN	33	0	7	6	2	1	17	0
16 JUN	82	0	3	12	4	1	60	4
20 JUN	251	0	35	71	1	29	105	10
23 JUN	393	3	31	54	1	50	250	4
27 JUN	2639	0	7	16	0	0	2569	48
30 JUN	870	0	6	26	0	1	838	0
MONTHLY MEAN	662.6	3.1	80.6	154.0	10.6	12.4	388.4	14.4
05 JUL	607	0	1	37	0	3	565	1
12 JUL	3075	0	1	53	0	0	2969	52
19 JUL	2744	0	0	2	0	0	2724	18
26 JUL	5117	0	0	15	1	0	5053	47
MONTHLY MEAN	2885.8	.0	.5	26.8	.3	.8	2827.8	29.5

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE CHANNEL
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	38	30	0	0	0	0	0	8
MONTHLY MEAN	38.0	30.0	.0	.0	.0	.0	.0	8.0
08 MAR	548	548	0	0	0	0	0	0
15 MAR	308	308	0	0	0	0	0	0
29 MAR	4753	4748	0	0	0	0	0	5
MONTHLY MEAN	1869.7	1868.0	.0	.0	.0	.0	.0	1.7
31 MAY	104	41	19	25	4	4	7	5
MONTHLY MEAN	104.0	41.0	19.0	25.0	4.0	4.0	7.0	5.0
02 JUN	929	33	215	504	16	135	8	18
06 JUN	739	29	148	488	35	11	19	10
08 JUN	751	48	216	425	21	13	20	8
13 JUN	52	5	2	16	0	4	21	5
16 JUN	61	18	1	9	0	2	30	2
20 JUN	337	1	47	34	2	31	211	11
23 JUN	348	72	19	22	2	10	155	68
27 JUN	299	3	2	25	0	0	247	22
30 JUN	777	4	13	12	0	0	739	10
MONTHLY MEAN	477.0	23.7	73.7	170.6	8.4	22.9	161.1	17.1
05 JUL	442	14	9	30	0	6	381	3
12 JUL	1837	3	1	0	12	0	1787	34
19 JUL	4391	1	1	19	0	0	4318	53
26 JUL	5630	0	0	0	1	0	5594	36
MONTHLY MEAN	3075.0	4.5	2.8	12.3	3.3	1.5	3020.0	31.5

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE WEST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
24 FEB	16	16	0	0	0	0	0	0
MONTHLY MEAN	16.0	16.0	.0	.0	.0	.0	.0	.0
01 MAR	138	68	0	0	0	0	0	70
08 MAR	523	520	0	0	0	0	0	4
15 MAR	557	557	0	0	0	0	0	0
22 MAR	100	99	0	0	0	0	0	2
29 MAR	933	931	0	0	0	0	0	3
MONTHLY MEAN	450.2	435.0	.0	.0	.0	.0	.0	15.8
05 APR	5	4	0	0	0	0	0	1
12 APR	0	0	0	0	0	0	0	0
19 APR	7	0	0	0	0	0	0	7
26 APR	8	1	0	0	1	0	0	6
MONTHLY MEAN	5.0	1.3	.0	.0	.3	.0	.0	3.5
03 MAY	49	2	1	0	10	0	0	36
10 MAY	153	6	0	62	46	0	0	38
16 MAY	29	4	0	13	6	0	0	6
23 MAY	223	22	7	156	26	0	0	12
31 MAY	247	17	65	96	38	6	10	15
MONTHLY MEAN	140.2	10.2	14.6	65.4	25.2	1.2	2.0	21.4
02 JUN	677	7	132	473	38	10	3	13
06 JUN	417	22	93	257	30	8	4	4
08 JUN	366	4	76	178	55	13	28	11
13 JUN	300	2	10	236	1	31	10	9
16 JUN	134	9	17	39	0	10	51	8
20 JUN	323	7	22	23	4	16	245	7
23 JUN	477	3	22	17	0	18	403	15
27 JUN	416	3	3	31	0	4	350	25
30 JUN	983	2	4	23	2	14	934	5
MONTHLY MEAN	454.8	6.6	42.1	141.9	14.4	13.8	225.3	10.8

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE WEST
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
05 JUL	1547	3	7	17	0	3	1509	8
12 JUL	1859	2	0	1	0	1	1838	17
19 JUL	3317	0	0	4	1	0	3280	32
26 JUL	4371	15	0	0	32	0	4305	19
MONTHLY MEAN	2773.5	5.0	1.8	5.5	8.3	1.0	2733.0	19.0
02 AUG	1252	0	0	6	0	0	1229	18
09 AUG	653	3	0	3	4	0	636	8
16 AUG	361	0	0	2	2	0	357	1
23 AUG	305	4	0	2	4	0	290	5
30 AUG	144	0	0	0	1	0	143	1
MONTHLY MEAN	543.0	1.4	.0	2.6	2.2	.0	531.0	6.6

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE POND LONG
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
01 MAR	32	30	0	0	0	0	0	3
08 MAR	270	269	0	0	0	0	0	1
15 MAR	994	994	0	0	0	0	0	0
22 MAR	205	204	0	0	0	0	0	1
29 MAR	465	463	0	0	0	0	0	2
MONTHLY MEAN	393.2	392.0	.0	.0	.0	.0	.0	1.4
05 APR	6	3	0	0	0	0	0	3
12 APR	0	0	0	0	0	0	0	0
19 APR	1	0	0	0	0	0	0	1
26 APR	10	0	0	0	1	0	0	9
MONTHLY MEAN	4.3	.8	.0	.0	.3	.0	.0	3.3
03 MAY	59	0	2	0	27	0	0	31
10 MAY	271	0	0	40	112	0	0	120
16 MAY	57	10	0	0	36	0	0	12
23 MAY	30	4	1	13	9	0	0	3
31 MAY	44	0	11	8	18	2	2	3
MONTHLY MEAN	92.2	2.8	2.8	12.2	40.4	.4	.4	33.8
02 JUN	192	0	24	112	24	28	3	2
06 JUN	348	1	74	159	59	3	36	17
08 JUN	377	0	96	242	16	21	2	2
13 JUN	62	0	11	18	2	1	29	2
16 JUN	91	0	5	18	4	1	57	7
20 JUN	85	0	4	10	1	8	57	6
23 JUN	176	1	12	20	0	13	118	12
27 JUN	220	0	9	75	0	0	116	21
30 JUN	389	0	10	38	0	4	301	36
MONTHLY MEAN	215.6	.2	27.2	76.9	11.8	8.8	79.9	11.7

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE POND LONG
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
05 JUL	953	0	15	61	1	0	859	18
12 JUL	842	0	1	0	0	0	820	21
19 JUL	3586	0	0	1	0	0	3452	133
26 JUL	924	0	0	0	0	0	914	11
MONTHLY MEAN	1576.3	.0	4.0	15.5	.3	.0	1511.3	45.8
02 AUG	930	0	0	0	1	0	918	11
09 AUG	451	0	0	2	2	0	445	3
16 AUG	581	0	0	0	0	0	578	3
23 AUG	190	0	0	0	0	0	190	0
30 AUG	79	0	0	0	1	0	77	1
MONTHLY MEAN	446.2	.0	.0	.4	.8	.0	441.6	3.6

TABLE IV-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 AQUATIC ECOLOGY STUDIES

ICHTHYOPLANKTON ABUNDANCE IN ALL DEPTH COLLECTIONS AT ALL TIMES
AT STATION BOWLINE POND SHORT
BOWLINE/LOVETT VICINITY

SAMPLING START DATE	(NO./1000 CU.M) TOTAL LARVAE	MAJOR SPECIES (NO./1000 CU.M) ATLANTIC TOMCOD	WHITE PERCH	STRIPED BASS	ALOSA SPP.	MORONE SPP.	BAY ANCHOVY	OTHER SPECIES
08 JUN	331	0	100	165	26	7	10	24
13 JUN	24	0	0	14	3	0	4	3
16 JUN	77	12	0	21	4	0	41	0
20 JUN	207	0	10	21	0	0	176	0
23 JUN	282	8	19	73	0	43	119	20
27 JUN	463	3	14	61	0	11	290	85
30 JUN	516	0	25	51	0	0	420	20
MONTHLY MEAN	271.4	3.3	24.0	58.0	4.7	8.7	151.4	21.7
05 JUL	1079	0	52	23	4	15	937	48
12 JUL	1481	0	5	23	5	0	1397	51
19 JUL	5381	0	3	9	49	0	5231	90
26 JUL	2740	0	3	6	21	0	2685	26
MONTHLY MEAN	2670.3	.0	15.8	15.3	19.8	3.8	2562.5	53.8

Striped bass larvae were first collected in the area in early May (10 May) and were present throughout the summer, with peak concentrations found in early June (2 June-13 June). White perch, the co-generic Morone sp., first appeared as a larval form approximately a week earlier (3 May) than striped bass and demonstrated essentially the same distribution throughout the summer. Unlike the striped bass juveniles, which remained in the area throughout August, the white perch juveniles were seldom represented in the July collections and none were obtained in August (Table IV-5).

The Alosa spp. larval forms were present in the Bowline vicinity from 26 April through the last collection date of the program (30 August).

Bay anchovy larvae first appeared in the ichthyoplankton collections on 31 May, and exhibited peak concentrations in late July-early August. Their presence was still evident at the termination of the studies on 30 August.

(iii) Spatial Distribution

There was no clear pattern of spatial distribution demonstrated for Atlantic tomcod, Alosa spp. or bay anchovy for the river stations (BE, BW and BCH). However, during peak concentrations of Atlantic tomcod and bay anchovy, the BW station exhibited lower larval densities (Figures IV-3 and IV-4).

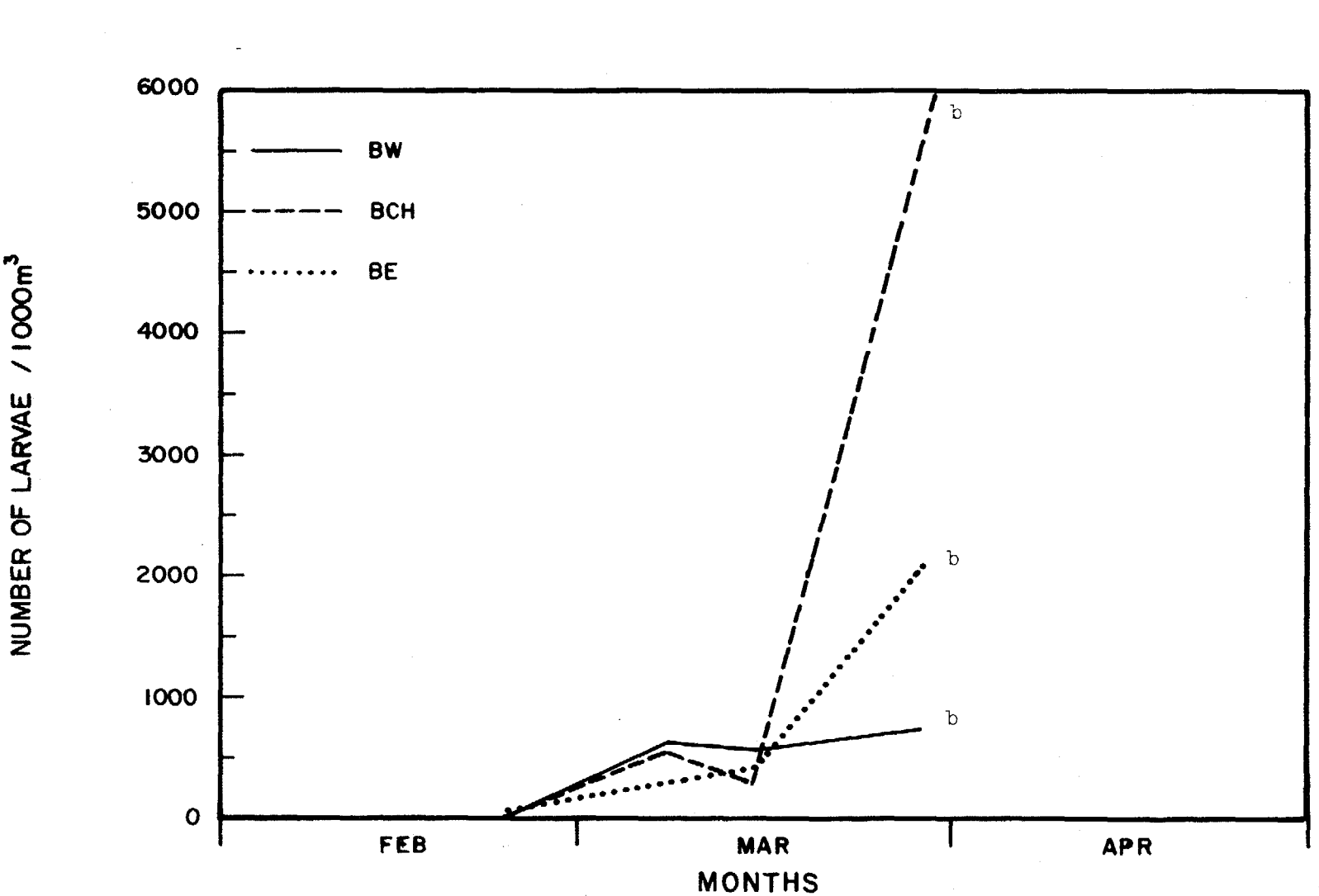
No significant difference ($\alpha = 0.05$) was found for striped bass or white perch abundance by station although significant differences were found between depths and photoperiod

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF ATLANTIC TOMCOD LARVAE BY STATION[a]

BOWLINE VICINITY - 1977



[a] Mean of surface and bottom samples on dates when all river stations (BW, BCH, BE) were sampled; no juveniles included

[b] Abundance dropped and intensified sampling was stopped

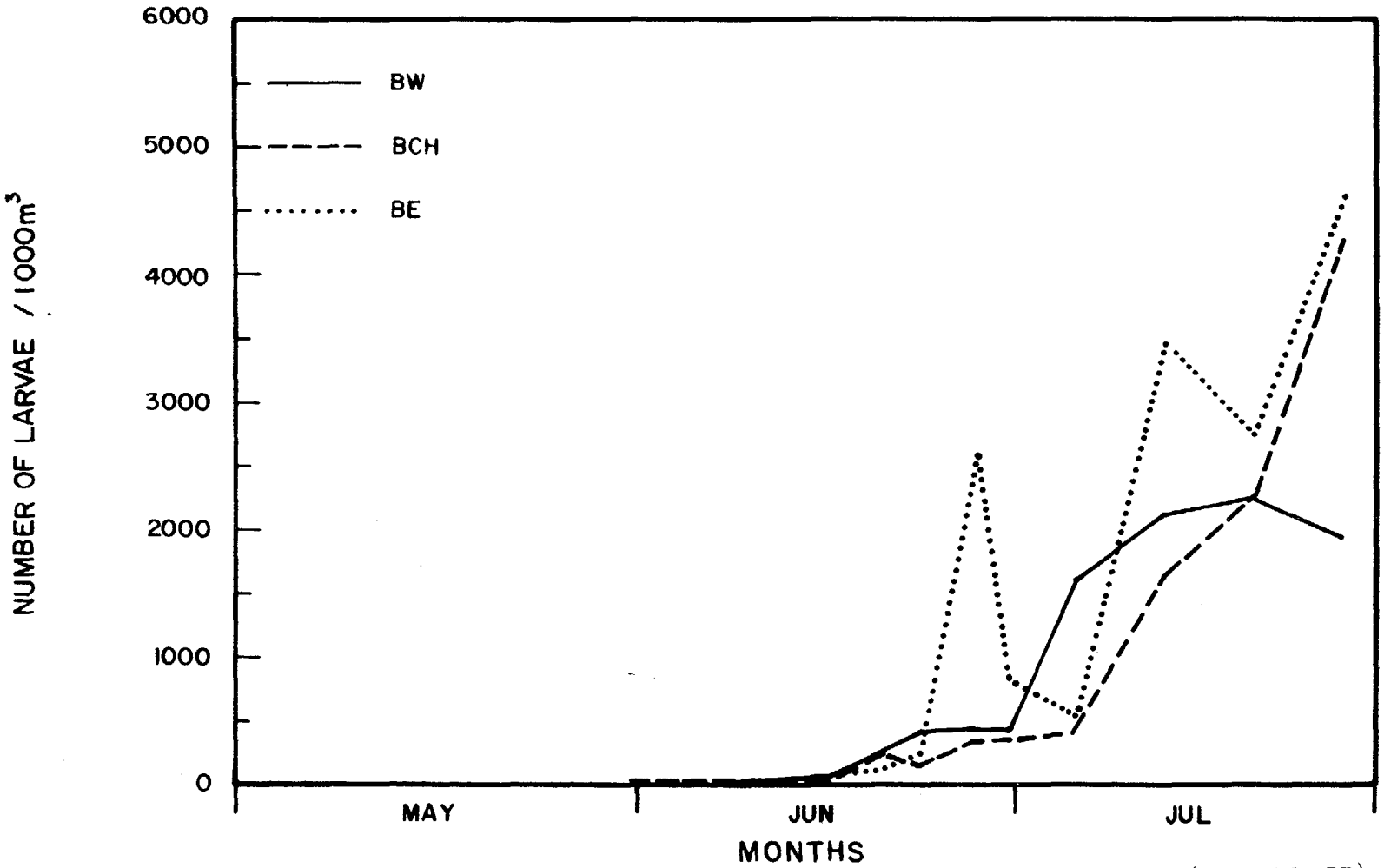
FIGURE IV-3

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF BAY ANCHOVY LARVAE BY STATION*

BOWLINE VICINITY - 1977



*Mean of surface and bottom samples on dates when all river stations (BW, BCH, BE) were sampled; no juveniles included

FIGURE IV-4

(Tables IV-6,7). Multiple comparisons using the Bonferroni procedure ($\alpha = 0.05$) for white perch and striped bass, demonstrated a larval preference for the bottom water during both day and night (Table IV-6,7). Although not statistically apparent, the peak concentrations of striped bass (Figure IV-5) and white perch (Figure IV-6) occurred at the Bowline east station.

The special juvenile study performed in July utilizing the lined otter trawl and fine mesh seine as well as the 1.0 meter Hensen net indicated that the juvenile larvae apparently preferred the shoal areas (Figures IV-7 and IV-8). Only a few white perch were collected, making quantification difficult, but the striped bass seemed to prefer the east side of the river and the Bowline bay area (Figure IV-8). In all cases, the juveniles were collected near the bottom and primarily at night (Table IV-8).

(iv) Length Frequency

Atlantic tomcod larvae (yolk-sac and post-yolk-sac) were first collected on 24 February, which was the first survey of 1977 (Figure IV-9). The yolk-sac stage persisted until 22 March, providing for a transition state from yolk-sac to post-yolk-sac larvae at approximately 7 mm (Figure IV-10). Very few tomcod larvae were collected from late March until late May, which represents the developmental period of post-yolk sac larvae. Figure IV-9 illustrates the occurrence of a rapid transition from post-yolk-sac larvae to juvenile larvae in early May, at a length of approximately 33 mm. In late March, the period of maximum tomcod abundance in the Bowline Point vicinity, the larval population present consisted of a mixture of yolk-sac and post-yolk sac larvae in the 6 to 9 mm length range.

TABLE IV-6

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FOUR-WAY ANOVA[a] FOR WHITE PERCH LARVAE (YOLK-SAC AND POST-YOLK-SAC) ON STATIONS, DATES, PHOTOPERIOD AND DEPTH

SOURCE	DF	SS	MS	F
Station (S)	4	1.2506	0.3126	1.21
Dates (T)	13	136.6159	10.5089	40.78*
Photoperiod (P)	1	6.7385	6.7385	26.15*
Depth (D)	2	8.8183	4.4091	17.11*
(S) x (P)	4	3.7371	0.9343	3.63**
(D) x (P)	2	3.7978	1.8989	7.37*
(T) x (P)	13	3.0132	0.2318	0.90
Error	304	78.3316	0.2576	

[a] log transformed data; non-orthogonal design
*significant at $\alpha = 0.05$
**significant at $\alpha = 0.01$

Multiple Comparisons (Bonferroni Procedure $\alpha = 0.05$)

I. Depth

Largest: Bottom Mid Surface : Smallest

II. Station x Photoperiod

Day; Largest: BCH BW BE BPL BPS : Smallest

Night; Largest: BE BPL BW BCH BPS : Smallest

III. Depth x Photoperiod

Day; Largest: Bottom Mid Surface : Smallest

Night; Largest: Bottom Surface Mid : Smallest

TABLE IV-7

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FOUR-WAY ANOVA[a] FOR STRIPED BASS LARVAE (YOLK-SAC AND POST-YOLK-SAC) ON STATIONS, DATES, PHOTOPERIOD AND DEPTH

SOURCE	DF	SS	MS	F
Station (S)	4	0.9423	0.2356	0.65
Dates (T)	13	137.6690	10.5899	29.27*
Photoperiod(P)	1	41.0625	41.0625	113.49*
Depth (D)	2	32.4703	16.2352	44.87*
(S) x (P)	4	5.8692	1.4673	4.06*
(D) x (P)	2	4.6281	2.3141	6.40*
(T) x (P)	13	7.5924	0.5840	1.61
Error	304	109.9899	0.3618	

[a] log transformed data; non-orthogonal design
*significant at $\alpha = 0.01$

Multiple Comparisons (Bonferroni Procedure $\alpha = 0.05$)

I. Depth

Largest: Bottom Mid Surface : Smallest

II. Station x Photoperiod

Day; Largest: BCH BW BE BPS BPL : Smallest

Night; Largest: BE BW BPL BPS BCH : Smallest

III. Depth x Photoperiod

Day; Largest: Bottom Mid Surface : Smallest

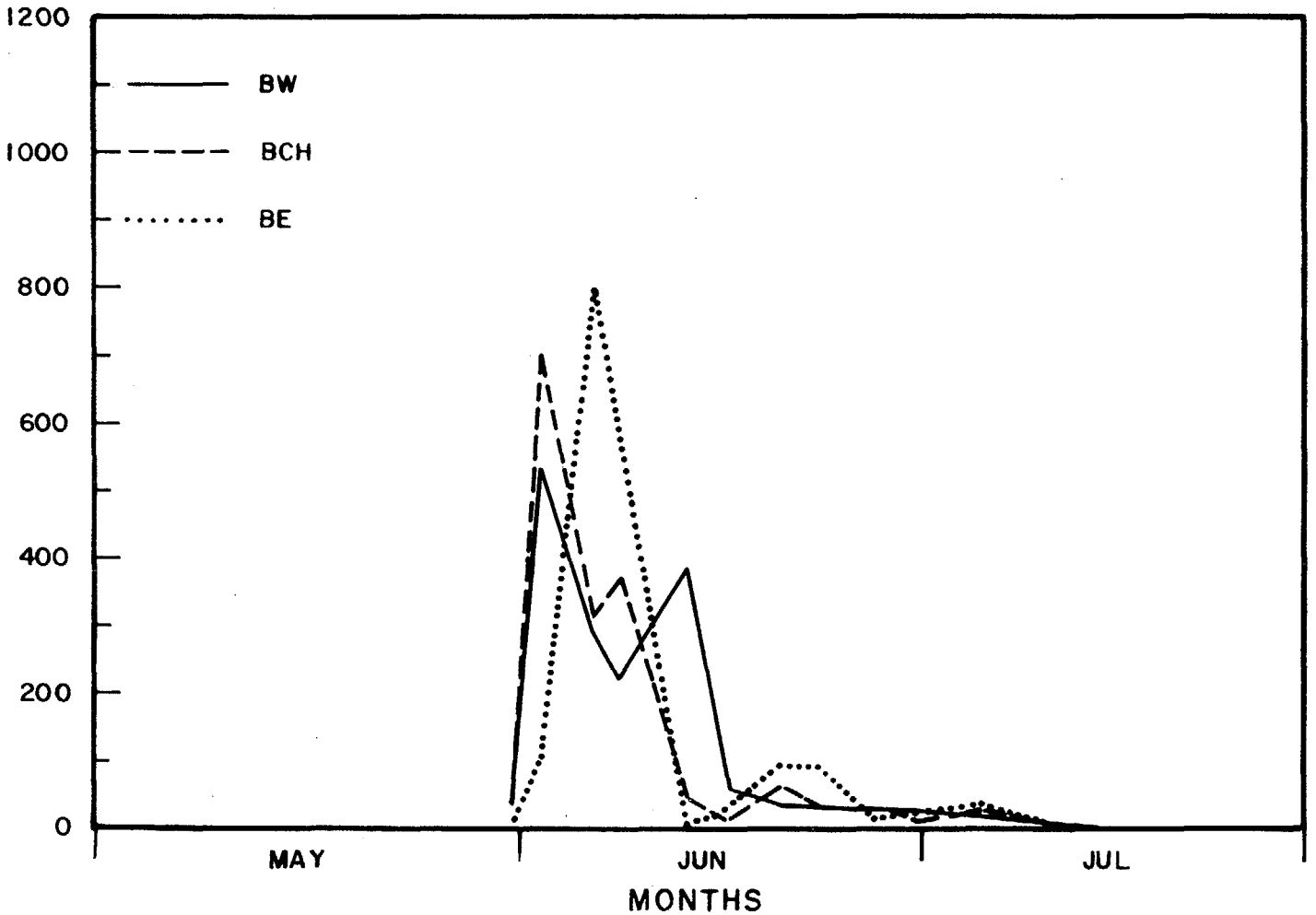
Night; Largest: Bottom Mid Surface : Smallest

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF STRIPED BASS LARVAE BY STATION*

BOWLINE VICINITY - 1977



*Mean of surface and bottom samples on dates when all river stations (BW, BCH, BE) were sampled; no juveniles included

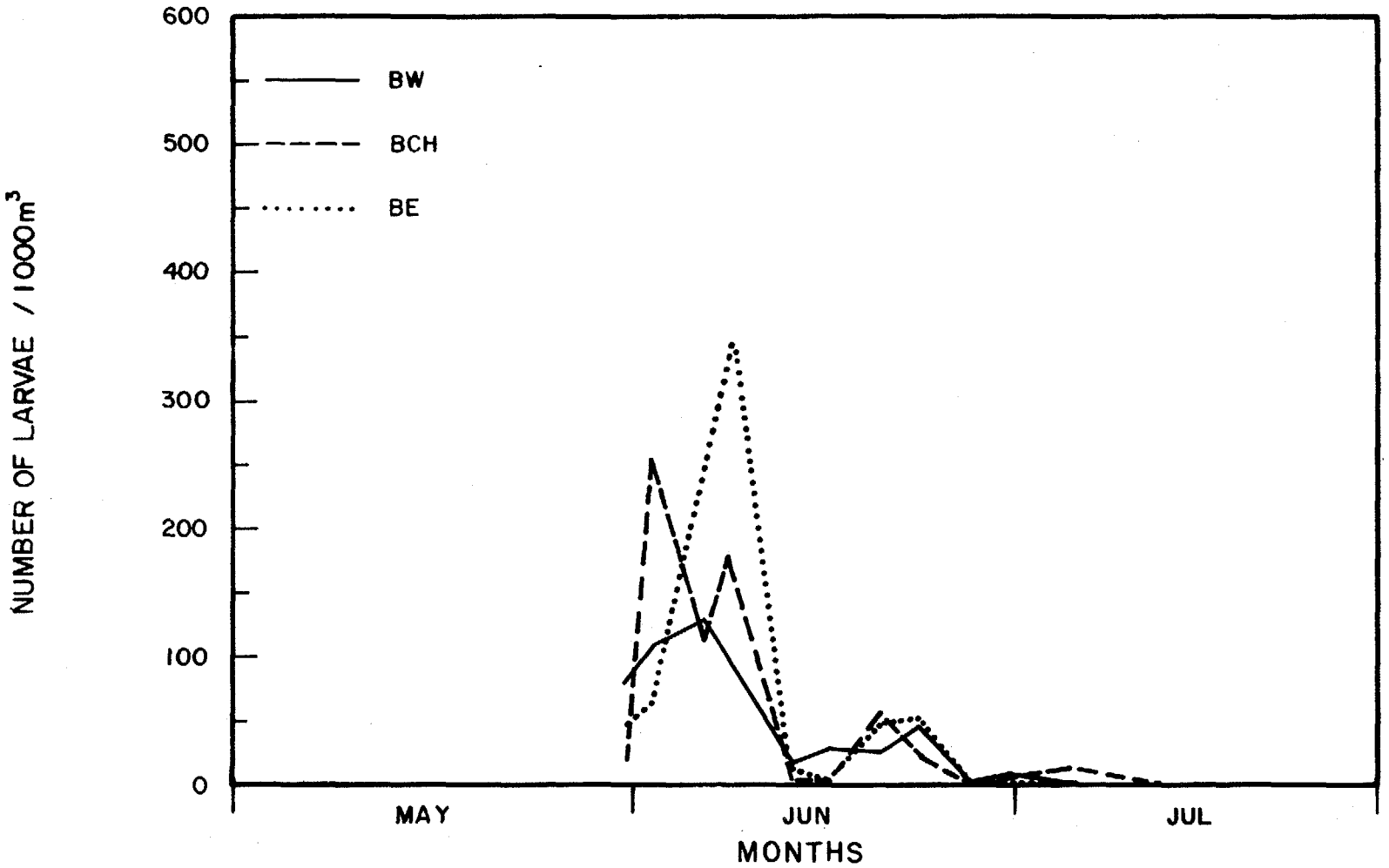
FIGURE IV-5

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF WHITE PERCH LARVAE BY STATION*

BOWLINE VICINITY - 1977



*Mean of surface and bottom samples on dates when all river stations (BW, BCH, BE) were sampled; no juveniles included

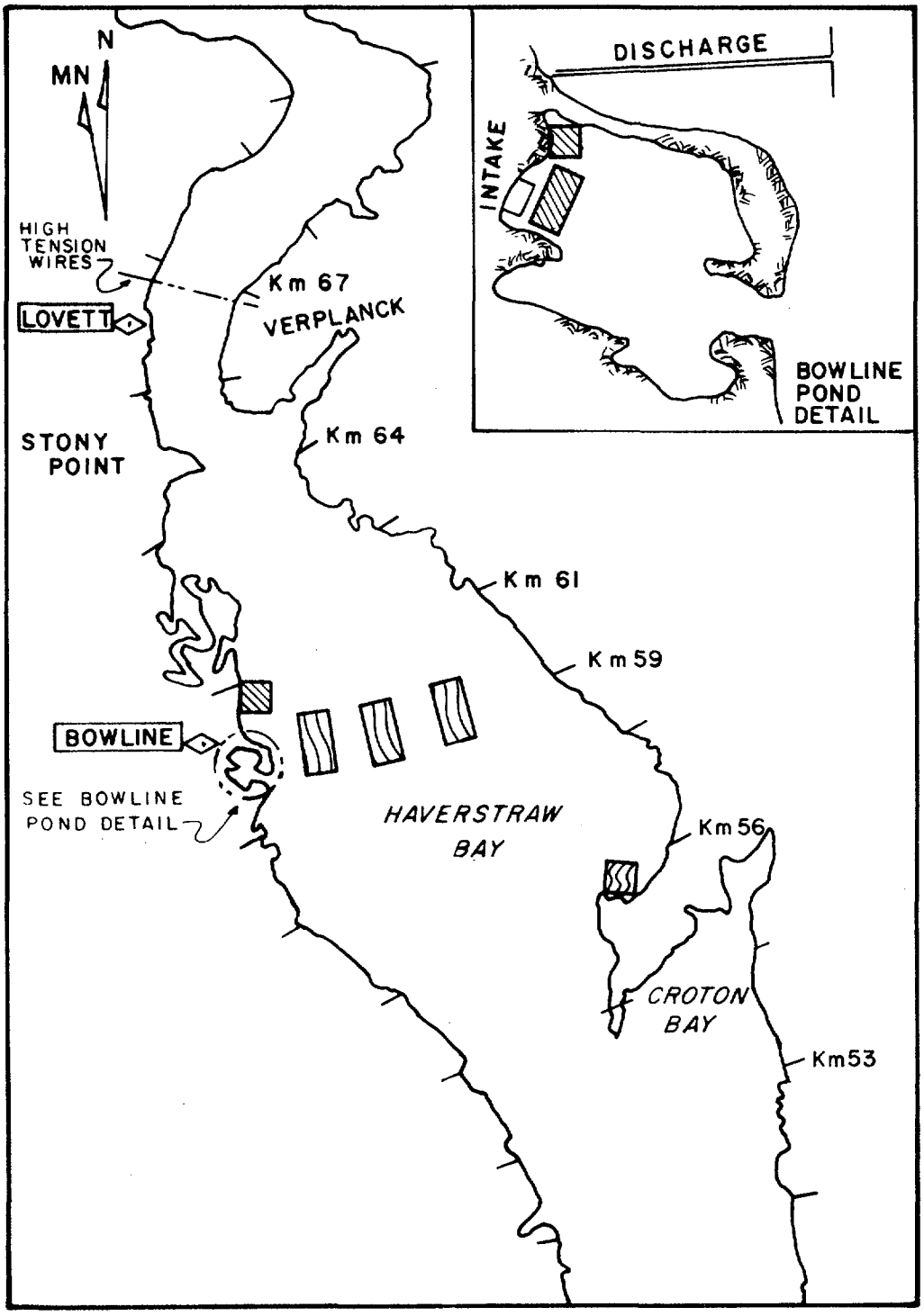
FIGURE IV-6

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF WHITE PERCH IN BOTTOM COLLECTIONS* DURING THE JUVENILE MORONE SPP. SPECIAL STUDY

BOWLINE VICINITY - 1977



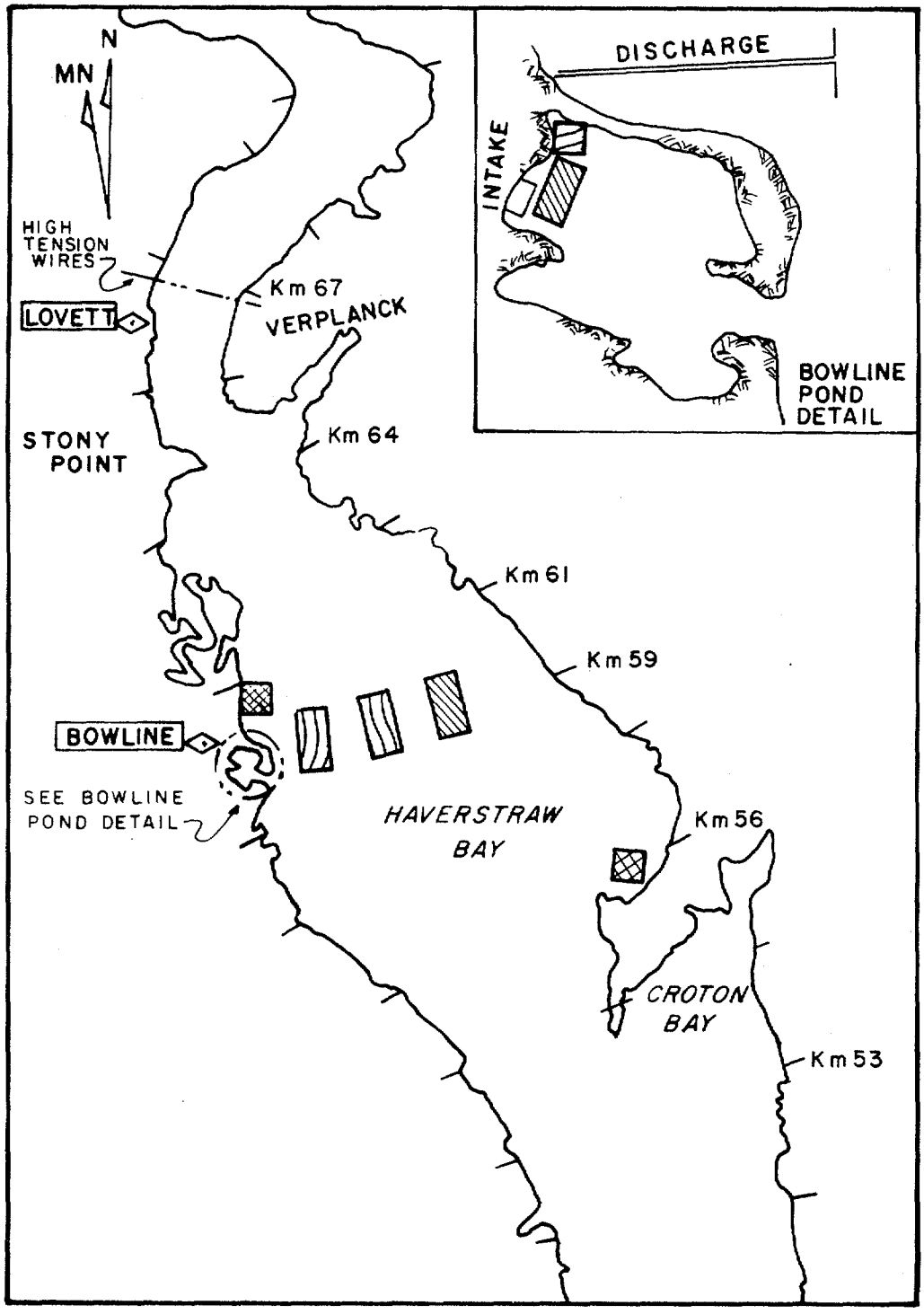
* MEAN OF ALL BOTTOM TOWS AND SEINES

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF STRIPED BASS IN BOTTOM COLLECTIONS* DURING THE JUVENILE MORONE SPP. SPECIAL STUDY

BOWLINE VICINITY - 1977



* MEAN OF ALL BOTTOM TOWS AND SEINES

TABLE IV-8

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE OF JUVENILE MORONE SPP. IN THE SPECIAL STUDY COLLECTIONS

BOWLINE VICINITY - 1977

DATE	SITE	DAY/ NIGHT	COLLECTION DEPTH	COLLECTION METHOD	SAMPLE VOLUME (m^3)	CONCENTRATION (NO./1000 m^3) WP	SB	TOTAL MORONE[a]
5- 6 JUL	BPS	D	S	HENSEN NET	48.0	0	0	0
		D	B	HENSEN NET	48.0	0	42	63
		N	S	OTTER TRAWL	206.7	29	15	48
		N	S	HENSEN NET	42.0	0	0	0
		N	B	OTTER TRAWL	229.0	35	192	253
		N	B	HENSEN NET	58.0	310	52	431
	BW	D	S	HENSEN NET	196.0	5	0	5
		D	B	HENSEN NET	254.0	0	8	8
		N	S	HENSEN NET	199.0	0	65	65
		N	B	OTTER TRAWL	810.9	0	5	5
		N	B	HENSEN NET	240.0	8	0	16
	BCH	D	S	HENSEN NET	188.0	5	0	5
		D	B	HENSEN NET	285.0	39	39	78
		N	S	OTTER TRAWL	954.0	0	0	0
		N	S	HENSEN NET	216.0	0	5	33
		N	B	OTTER TRAWL	830.0	0	0	0
		N	B	HENSEN NET	232.0	0	26	26
	BE	D	S	HENSEN NET	201.0	0	0	0
		D	B	HENSEN NET	218.0	0	78	78
		N	S	HENSEN NET	227.0	0	35	35
		N	B	OTTER TRAWL	842.7	0	38	43
		N	B	HENSEN NET	245.0	4	33	49
12-13 JUL	BPS	D	S	OTTER TRAWL	283.0	0	0	0
		D	S	HENSEN NET	46.0	0	0	0
		D	B	OTTER TRAWL	235.3	34	34	76
		D	B	HENSEN NET	55.0	0	0	0
		N	S	OTTER TRAWL	273.5	29	11	40
		N	S	HENSEN NET	68.0	0	0	0
		N	B	OTTER TRAWL	209.9	24	48	71
		N	B	HENSEN NET	33.0	30	121	151
	BW	D	S	OTTER TRAWL	871.3	0	0	0
		D	S	HENSEN NET	201.0	0	0	0
		D	B	OTTER TRAWL	947.6	0	2	3
		D	B	HENSEN NET	232.0	0	0	4
		N	S	OTTER TRAWL	874.5	0	2	2
		N	S	HENSEN NET	168.0	0	0	0
		N	B	OTTER TRAWL	950.8	2	73	75
		N	B	HENSEN NET	282.0	0	4	4
	BCH	D	S	HENSEN NET	199.0	0	0	0
		D	B	OTTER TRAWL	899.9	0	0	0
		D	B	HENSEN NET	254.0	4	0	4
		N	S	HENSEN NET	161.0	0	0	0
		N	B	OTTER TRAWL	966.7	1	2	3
		N	B	HENSEN NET	210.0	0	0	0
	BE	D	S	HENSEN NET	213.0	5	0	5
		D	B	OTTER TRAWL	1106.6	0	72	72
		D	B	HENSEN NET	265.0	0	0	0
		N	S	HENSEN NET	164.0	0	0	0
		N	B	OTTER TRAWL	928.6	1	224	225
		N	B	HENSEN NET	266.0	0	211	211

TABLE IV-8 (CONTINUED)

ABUNDANCE OF JUVENILE MORONE SPP. IN THE SPECIAL STUDY COLLECTIONS

DATE	SITE	DAY/ NIGHT	COLLECTION DEPTH	COLLECTION METHOD	SAMPLE VOLUME (m^3)	CONCENTRATION (NO./1000 m^3) WP	SB	TOTAL MORONE[a]
12-13 JUL (CONT.)	BPNEC	D	S	OTTER TRAWL	359.3	3	3	6
		N	S	OTTER TRAWL	477.0	0	40	42
	BPSC	D	S	OTTER TRAWL	368.9	0	0	3
		N	S	OTTER TRAWL	518.3	8	8	15
	BSW	D	S	OTTER TRAWL	1024.0	2	4	6
		N	S	OTTER TRAWL	906.3	1	11	12
	BB	D	S	OTTER TRAWL	1039.9	1	9	10
		N	S	OTTER TRAWL	941.3	2	14	16
	BNE	D	S	OTTER TRAWL	954.0[b]	0	0	0
		N	S	OTTER TRAWL	903.1	0	13	13
	BSE	D	S	OTTER TRAWL	969.9	0	0	0
		N	S	OTTER TRAWL	909.5	7	9	15
	BBS	D	S	SEINE	91.2	11	0	11
		N	S	SEINE	91.2	55	537	592
	BPN	D	S	SEINE	182.4	5	0	5
		N	S	SEINE	182.4	55	38	93
	CPS	D	S	SEINE	91.2	0	0	0
		N	S	SEINE	91.2	22	252	274
19-20 JUL	BPS	D	S	HENSEN NET	53.0	0	0	0
		D	B	HENSEN NET	70.0	0	0	0
		N	S	HENSEN NET	55.0	0	0	0
		N	S	OTTER TRAWL	209.9	0	0	0
		N	B	HENSEN NET	59.0	17	51	68
		N	B	OTTER TRAWL	241.7	17	17	33
	BW	D	S	HENSEN NET	192.0	0	0	0
		D	B	HENSEN NET	243.0	0	4	4
		N	S	HENSEN NET	168.0	0	0	0
		N	B	OTTER TRAWL	931.7	0	5	5
		N	B	HENSEN NET	203.0	0	20	20
	BCH	D	S	HENSEN NET	230.0	0	0	0
		D	B	HENSEN NET	287.0	3	3	6
		N	S	HENSEN NET	200.0	0	0	0
		N	B	OTTER TRAWL	1093.9	0	0	0
		N	B	HENSEN NET	246.0	0	110	110
	BE	D	S	HENSEN NET	225.0	0	0	0
		D	B	HENSEN NET	194.0	0	0	0
		N	S	HENSEN NET	194.0	0	0	0
		N	S	OTTER TRAWL	950.8	0	3	3
		N	B	HENSEN NET	216.0	0	9	9
		N	B	OTTER TRAWL	973.1	0	113	113

[a] Reflects total of WP, SB and UID MORONE
[b] TSK meter malfunction, volume calculated by velocity

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER TIME

FOR ATLANTIC TOMCOD LARVAE

BOWLINE VICINITY - 1977

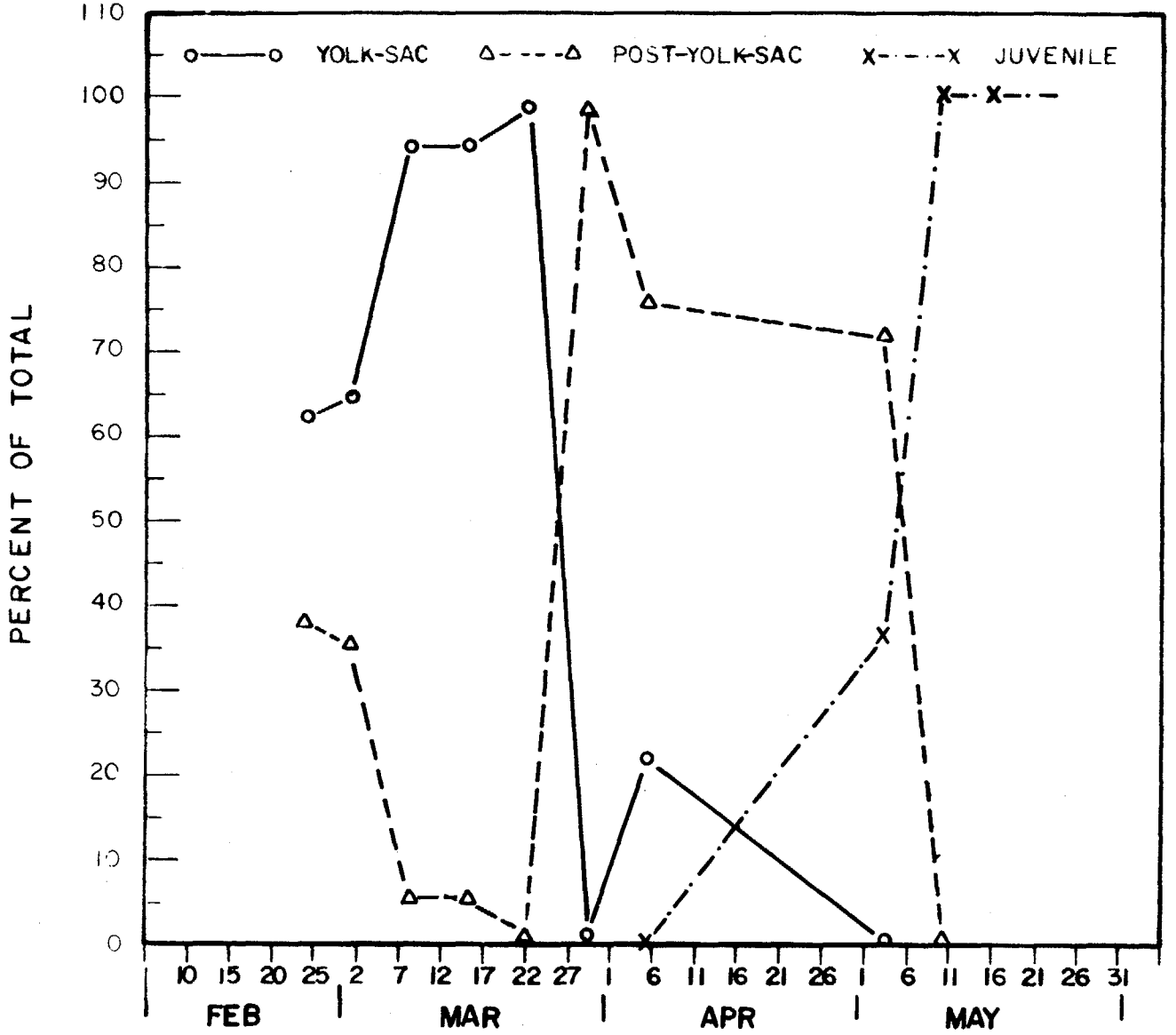


FIGURE IV-9

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER LENGTH

FOR ATLANTIC TOMCOD LARVAE

BOWLINE VICINITY - 1977

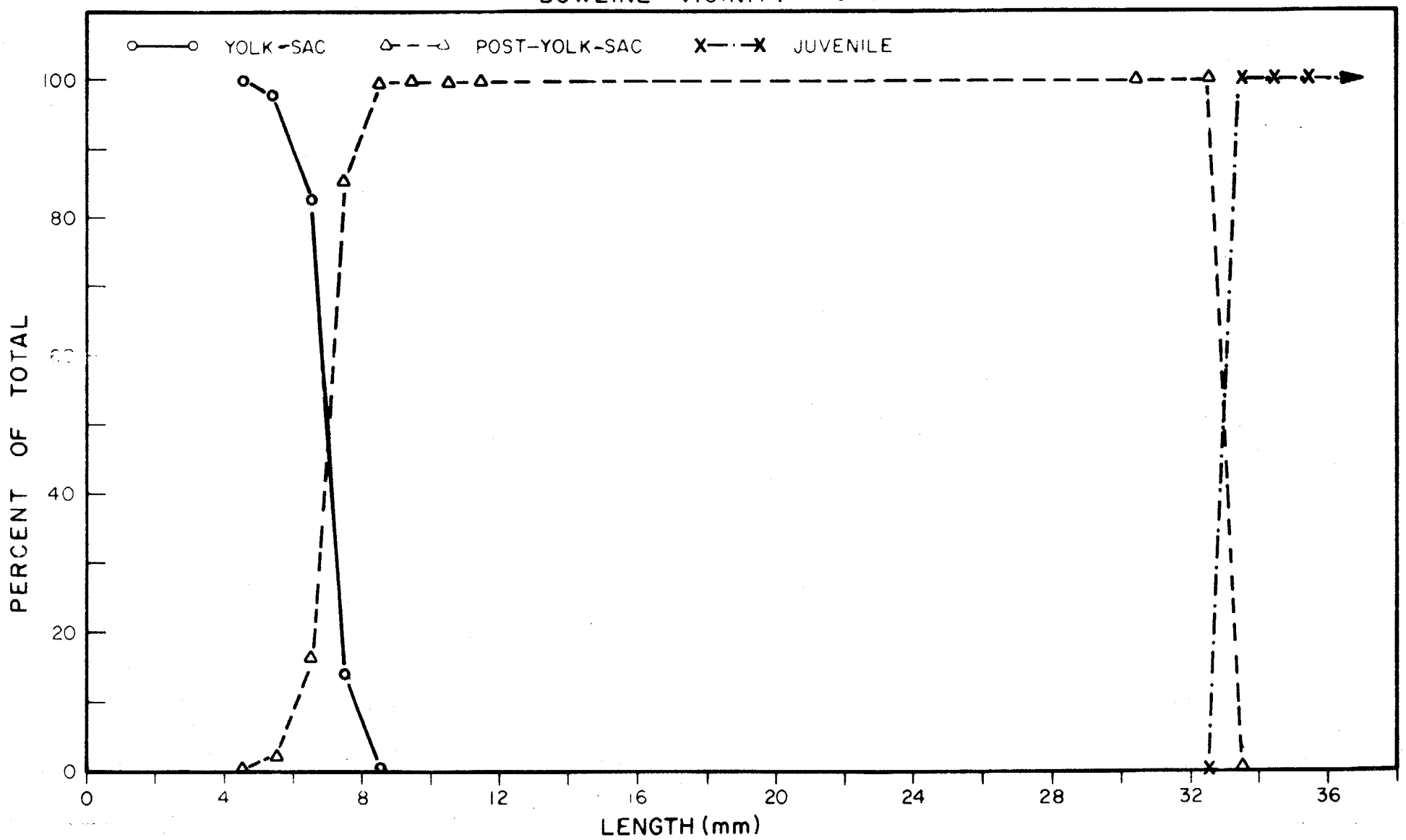


FIGURE IV-10

Striped bass larvae, all of the yolk-sac life stage, were first collected on 2 May. Transition to the post-yolk-sac stage occurred in late May (Figure IV-11) at a length of approximately 5 mm (Figure IV-12). The post-yolk-sac stage predominated until early July when the larvae were approximately 22 mm in length. The larvae length distribution during the period of peak abundance in the Bowline Point vicinity was from 3 to 14 mm, with a mean length of approximately 6 mm (post-yolk-sac life stage) (Figure IV-13).

Except for a small percentage of the white perch larvae collected in late May and early July, most of the white perch collected were in the post-yolk-sac life stage (Figure IV-14). The transition from yolk-sac to post-yolk-sac occurred at approximately 3 mm and was complete by a length of 6 mm. The transition from post-yolk-sac to juvenile was not as clear, although 50% of the population had developed the juvenile characteristics at a length of 18 mm (Figure IV-15). The larval length distribution during the period of peak white perch abundance in the Bowline Point vicinity (late May-early June) covered a range of 2-12 mm with a mean of approximately 5 mm (Figure IV-16), almost solely of the post-yolk-sac life stage (Figure IV-15).

Very few Alosa spp. larvae were collected within the study area. Of these, most were collected from mid-May to mid-June (Table IV-5) and were predominantly of the post-yolk-sac life stage (Table IV-9). Few Alosa spp. larvae were collected making any attempt to characterize the growth pattern of each life stage impossible.

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER TIME FOR STRIPED BASS LARVAE

BOWLINE VICINITY - 1977

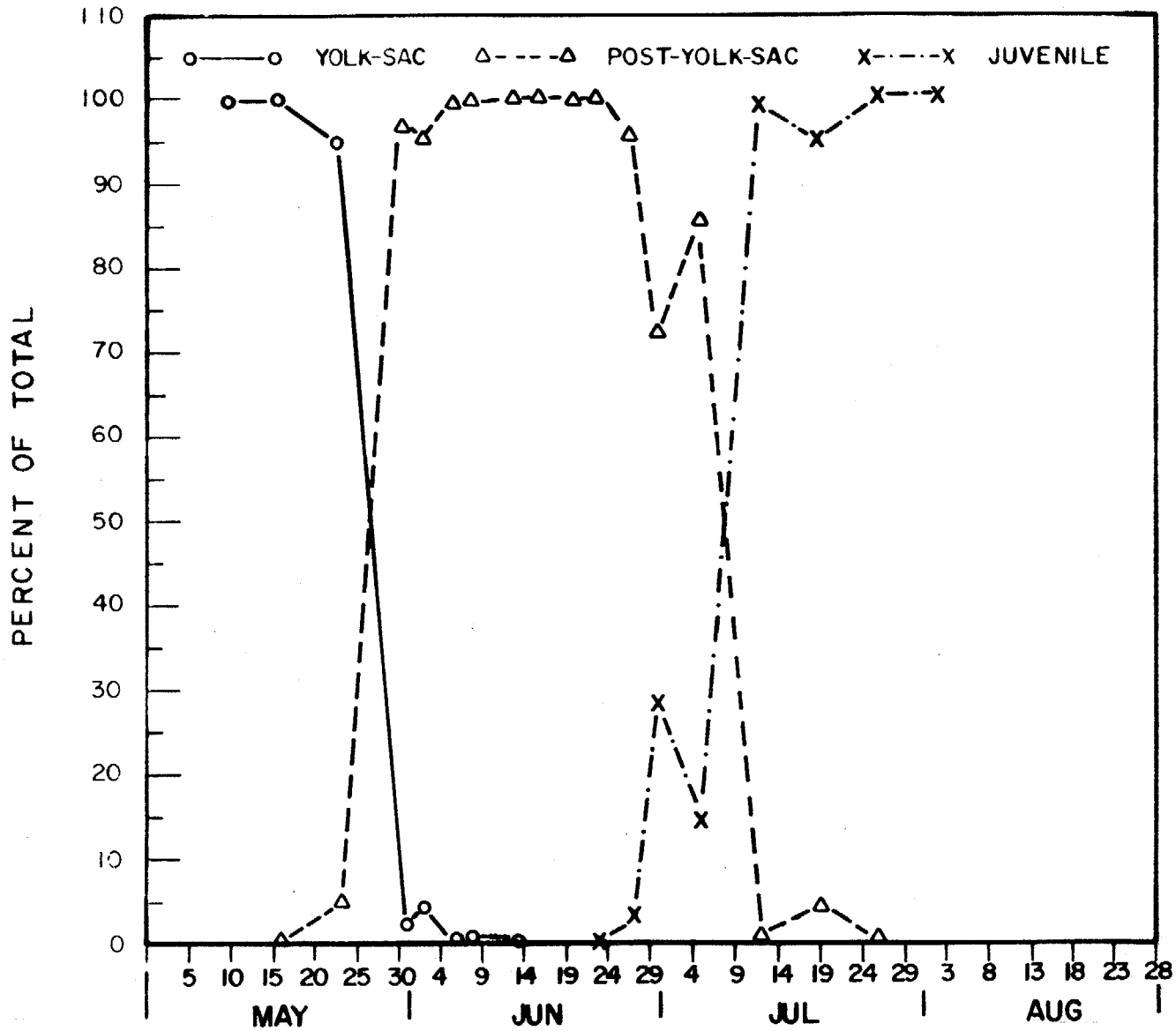


FIGURE IV-11

ORANGE AND ROCKLAND UTILITIES, INC

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER LENGTH

FOR STRIPED BASS LARVAE

BOWLINE VICINITY - 1977

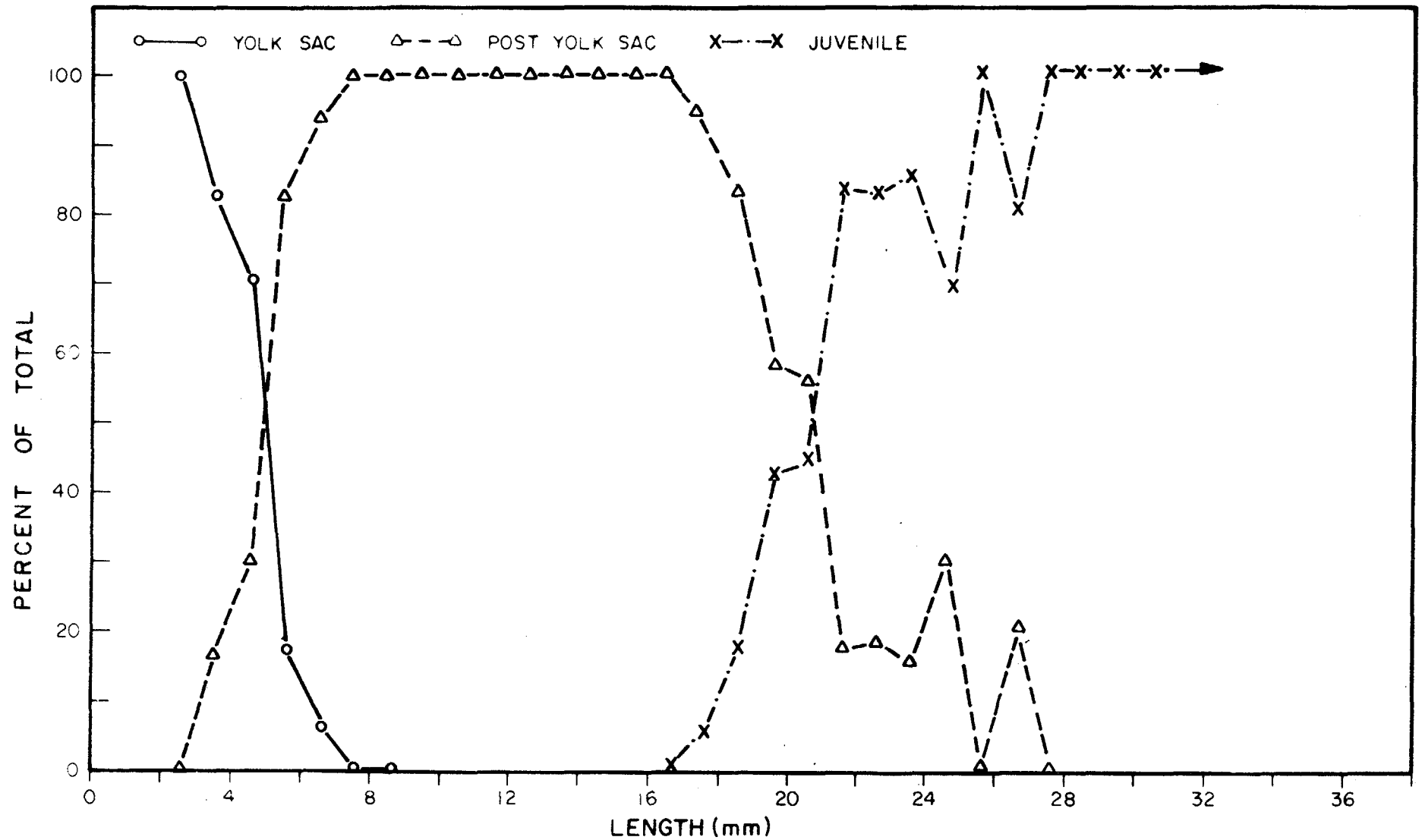


FIGURE IV-12

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDY
LENGTH FREQUENCY DISTRIBUTION
OF
STRIPED BASS LARVAE

BOWLINE VICINITY - 1977

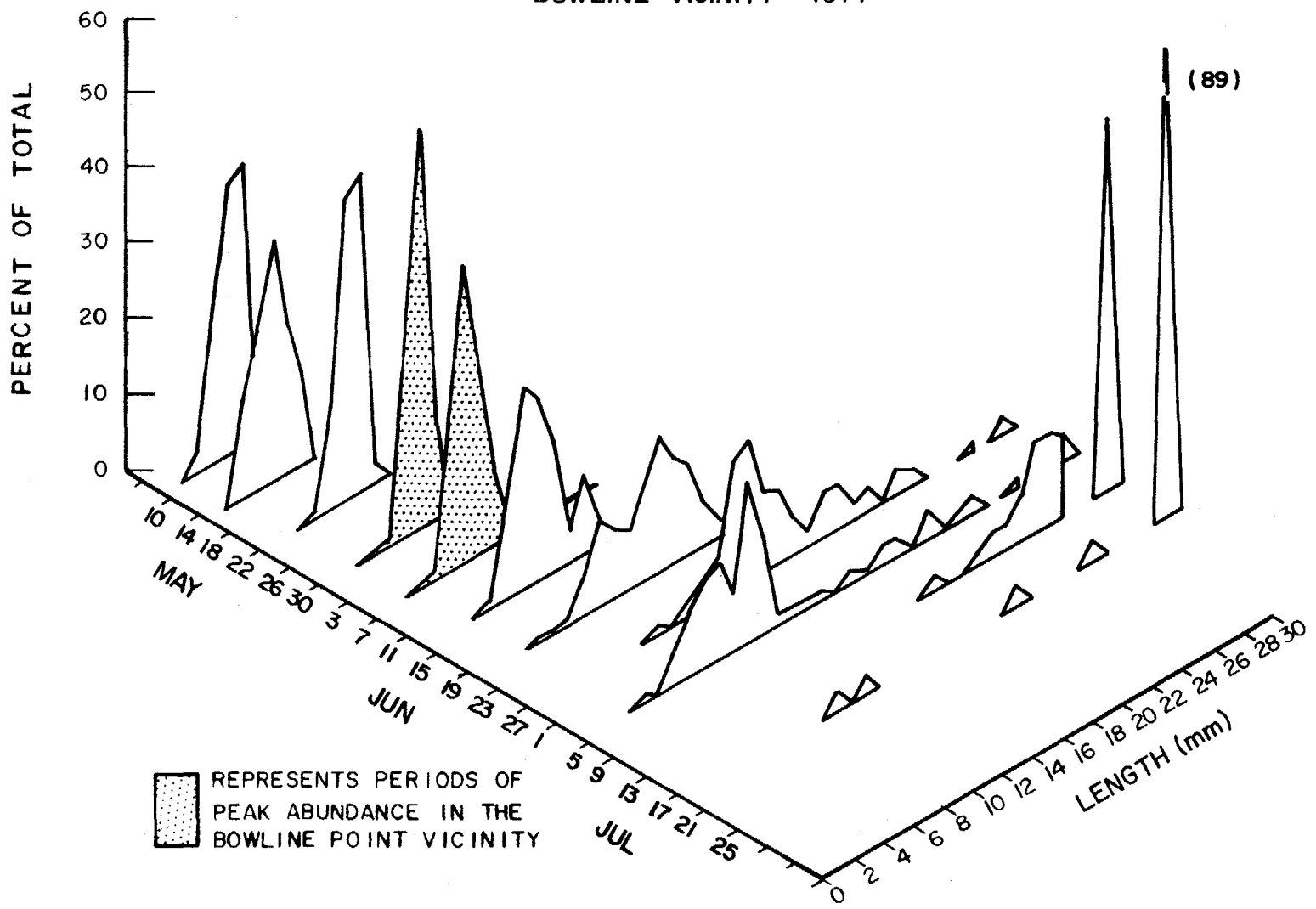


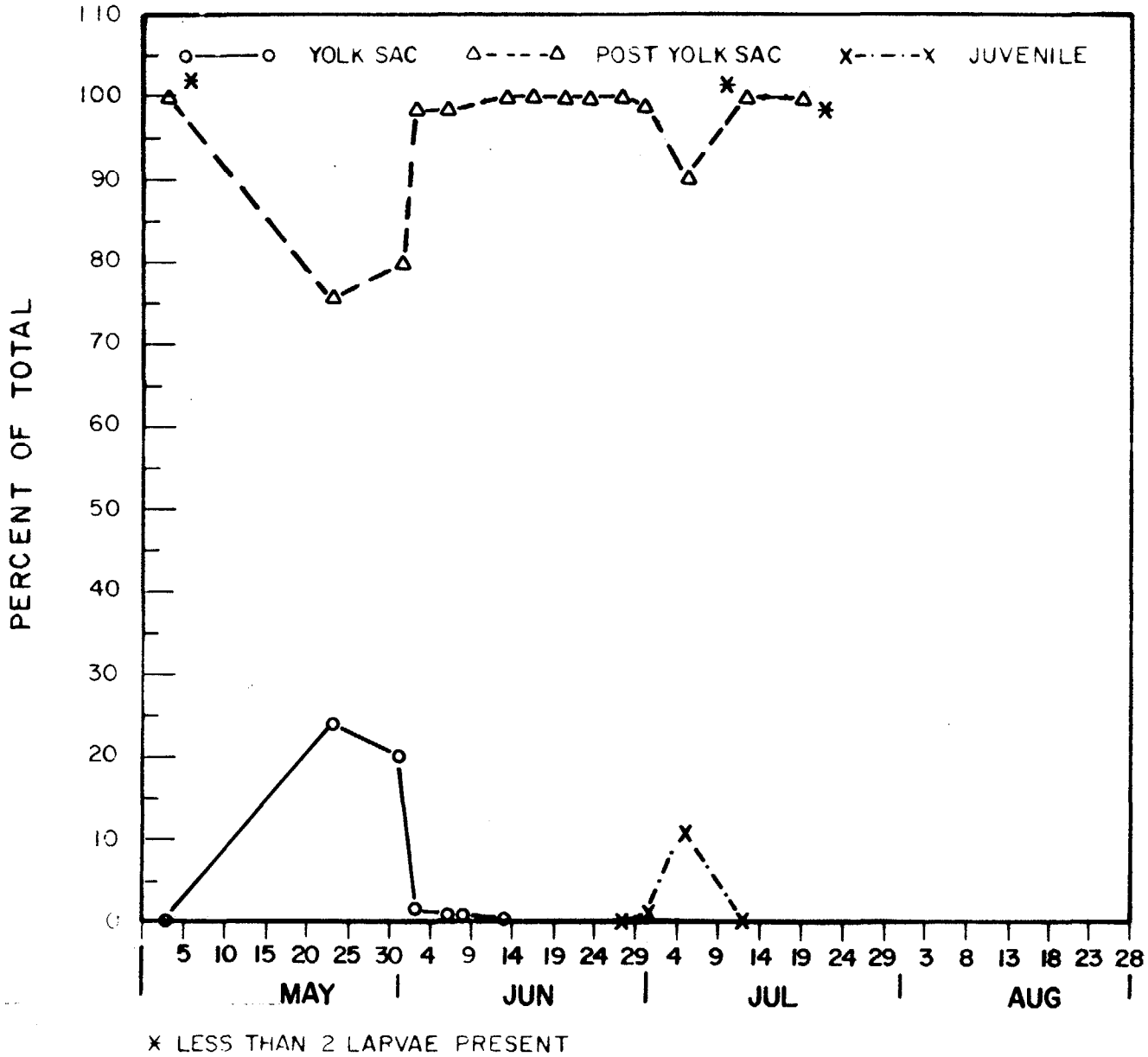
FIGURE IV-13

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER TIME FOR WHITE PERCH LARVAE

BOWLINE VICINITY - 1977



* LESS THAN 2 LARVAE PRESENT

FIGURE IV-11

ORANGE AND ROCKLAND UTILITIES, INC

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER LENGTH

FOR WHITE PERCH LARVAE

BOWLINE VICINITY – 1977

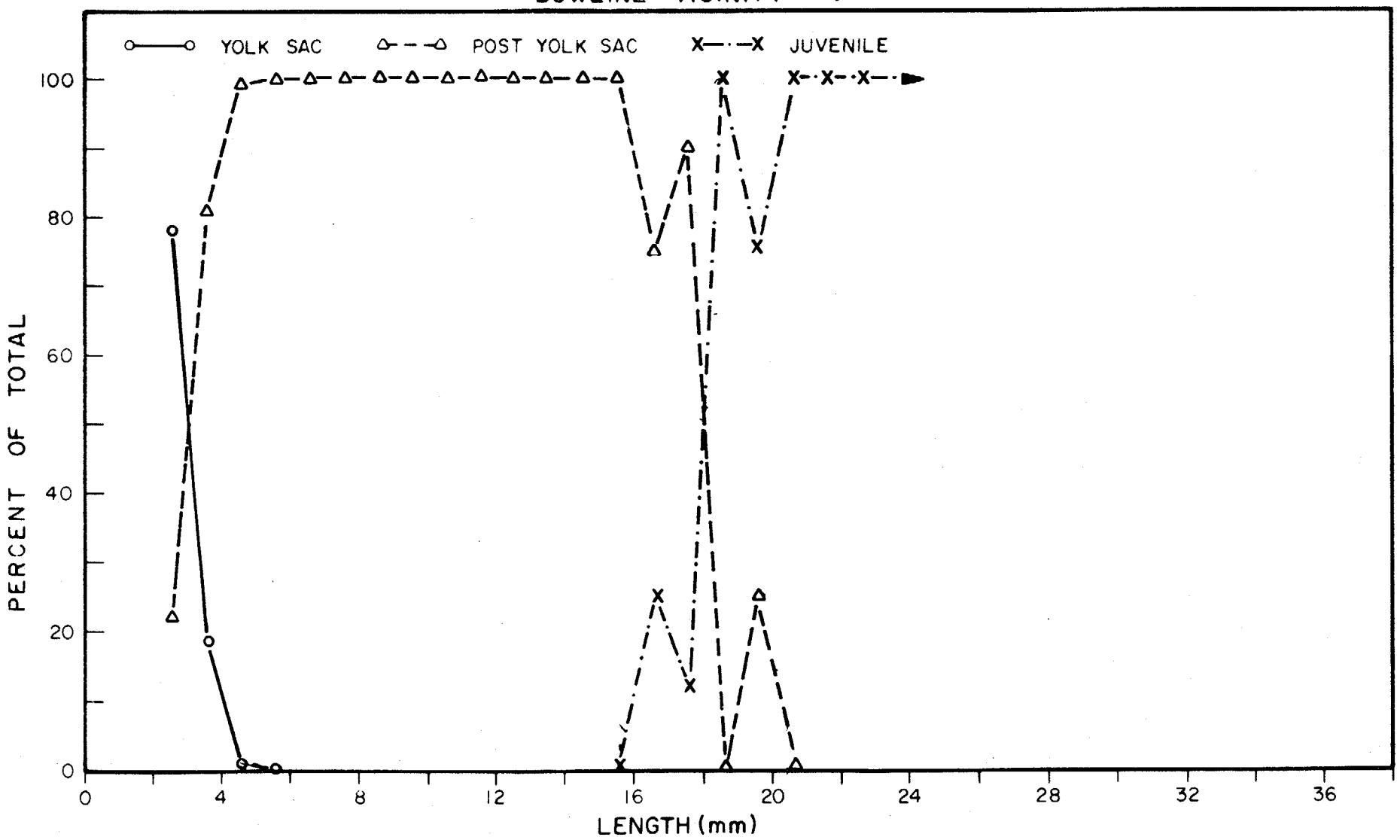


FIGURE IV-15

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDY
LENGTH FREQUENCY DISTRIBUTION
OF
WHITE PERCH LARVAE

BOWLINE VICINITY - 1977

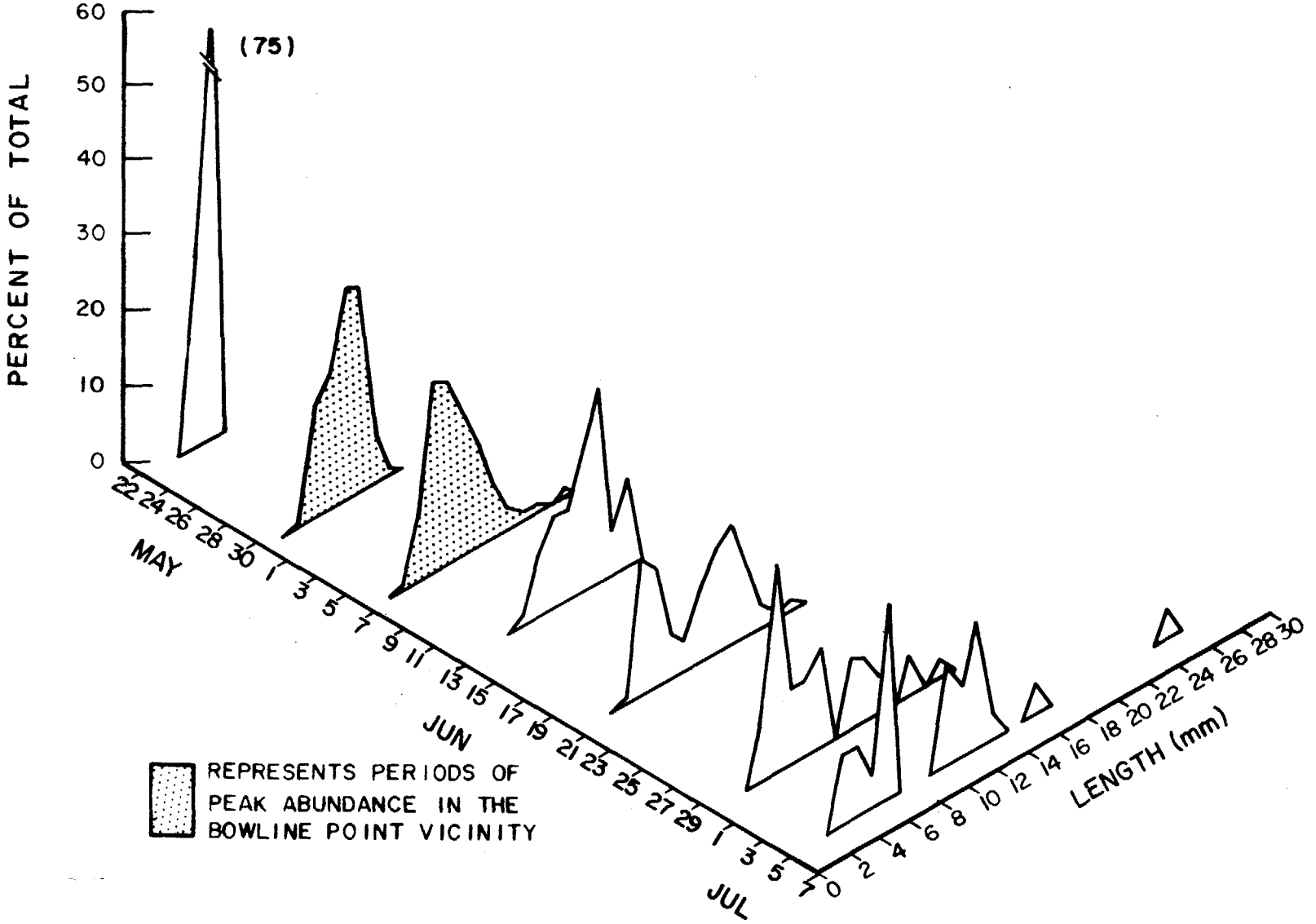


FIGURE IV-16

TABLE IV-9

ORANGE & ROCKLAND UTILITIES, INCORPORATED
1977 ICHTHYOPLANKTON COLLECTION DATA

LENGTH FREQUENCY BY LIFE STAGES

ALOSA SPP. AT BOWLINE RIVER VICINITY

LENGTH INTERVAL -- (MM) ---	TOTAL NO. ANALYZED	PERCENTAGE Y-SAC	PY-SAC	JUVN	UNID
3.1 - 4.0	1	-	100.0	-	-
4.1 - 5.0	7	14.3	85.7	-	-
5.1 - 6.0	52	7.7	90.4	-	1.9
6.1 - 7.0	195	1.0	99.0	-	-
7.1 - 8.0	121	-	100.0	-	-
8.1 - 9.0	90	-	98.9	-	1.1
9.1 - 10.0	69	-	100.0	-	-
10.1 - 11.0	51	-	100.0	-	-
11.1 - 12.0	37	-	100.0	-	-
12.1 - 13.0	40	-	100.0	-	-
13.1 - 14.0	22	-	100.0	-	-
14.1 - 15.0	14	-	100.0	-	-
15.1 - 16.0	9	-	100.0	-	-
16.1 - 17.0	6	-	100.0	-	-
17.1 - 18.0	3	-	100.0	-	-
18.1 - 19.0	1	-	100.0	-	-
19.1 - 20.0					
20.1 - 21.0					
21.1 - 22.0	1	-	100.0	-	-
22.1 - 23.0					
23.1 - 24.0					
24.1 - 25.0					
25.1 - 26.0					
26.1 - 27.0					
27.1 - 28.0					
28.1 - 29.0					
29.1 - 30.0					
30.1 - 31.0					
31.1 - 32.0					
32.1 - 33.0					
33.1 - 34.0					
34.1 - 35.0					
35.1 - 36.0					
36.1 - 37.0					
37.1 - 38.0					
38.1 - 39.0					
39.1 - 40.0	1	-	-	100.0	-
40.1 - 41.0					
41.1 - 42.0					
42.1 - 43.0	4	-	-	100.0	-
43.1 - 44.0	6	-	-	100.0	-
44.1 - 45.0	4	-	-	100.0	-
45.1 - 46.0	3	-	-	100.0	-

The growth of bay anchovy larvae, as demonstrated by length frequency distribution, is difficult to describe due to the continuous spawn occurring throughout the summer. This is illustrated for the Haverstraw Bay area in Figure IV-17. The recruitment of young larvae into the population from early June through late August is indicative of continuous spawning throughout this period. The transition of yolk-sac larvae to post-yolk-sac larvae occurred at a very small size. Development to the post-yolk-sac stage was complete in 50% of the population at 1 to 2 mm, whereas all bay anchovy larvae greater than 5 mm had developed into the post-yolk-sac life stage (Figure IV-18).

The development of juvenile characteristics was not nearly as well defined. Some individuals were fully developed at 21 mm, while others still retained the characteristics of the post-yolk-sac stage at 28 mm. All bay anchovy larvae greater than 30 mm had developed the juvenile characteristics (Figure IV-18). Throughout the period of peak bay anchovy abundance in the Bowline Point area (early July to early August), most of the bay anchovy larvae were in the post-yolk-sac life stage (Figure IV-19).

b. Multi-year Trends

(i) Species Assemblage

The same larval species have dominated the ichthyoplankton collections in the Bowline Point vicinity since 1973. Atlantic tomcod represents the major winter spawner, followed later in the year by white perch and striped bass. The Alosa spp. (American shad, blueback herring, and alewife) characteristically prefer the freshwater reaches

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDY

LENGTH FREQUENCY DISTRIBUTION

OF

BAY ANCHOVY LARVAE

BOWLINE VICINITY - 1977

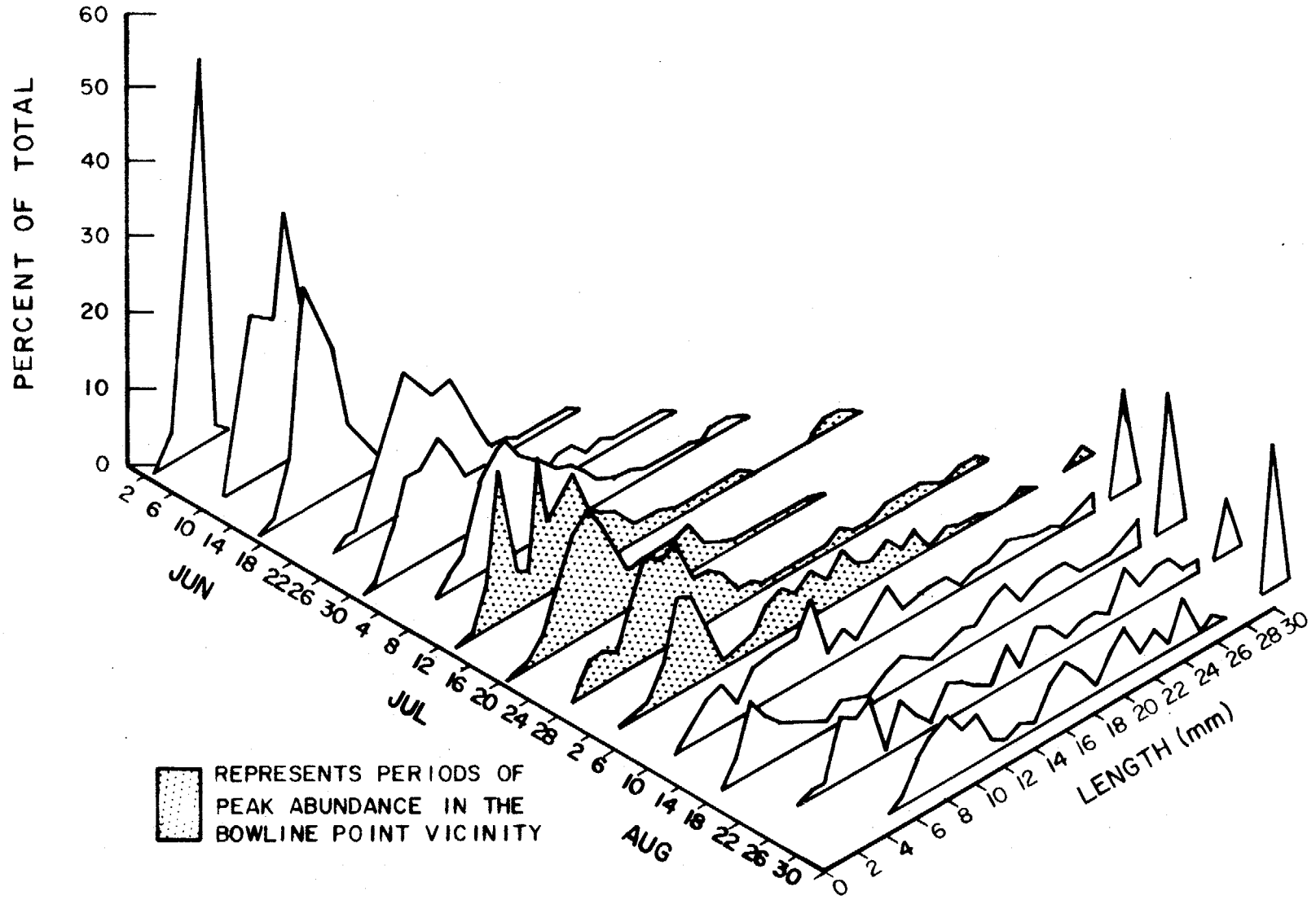


FIGURE IV-17

ORANGE AND ROCKLAND UTILITIES, INC

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER LENGTH

FOR BAY ANCHOVY LARVAE

BOWLINE VICINITY - 1977

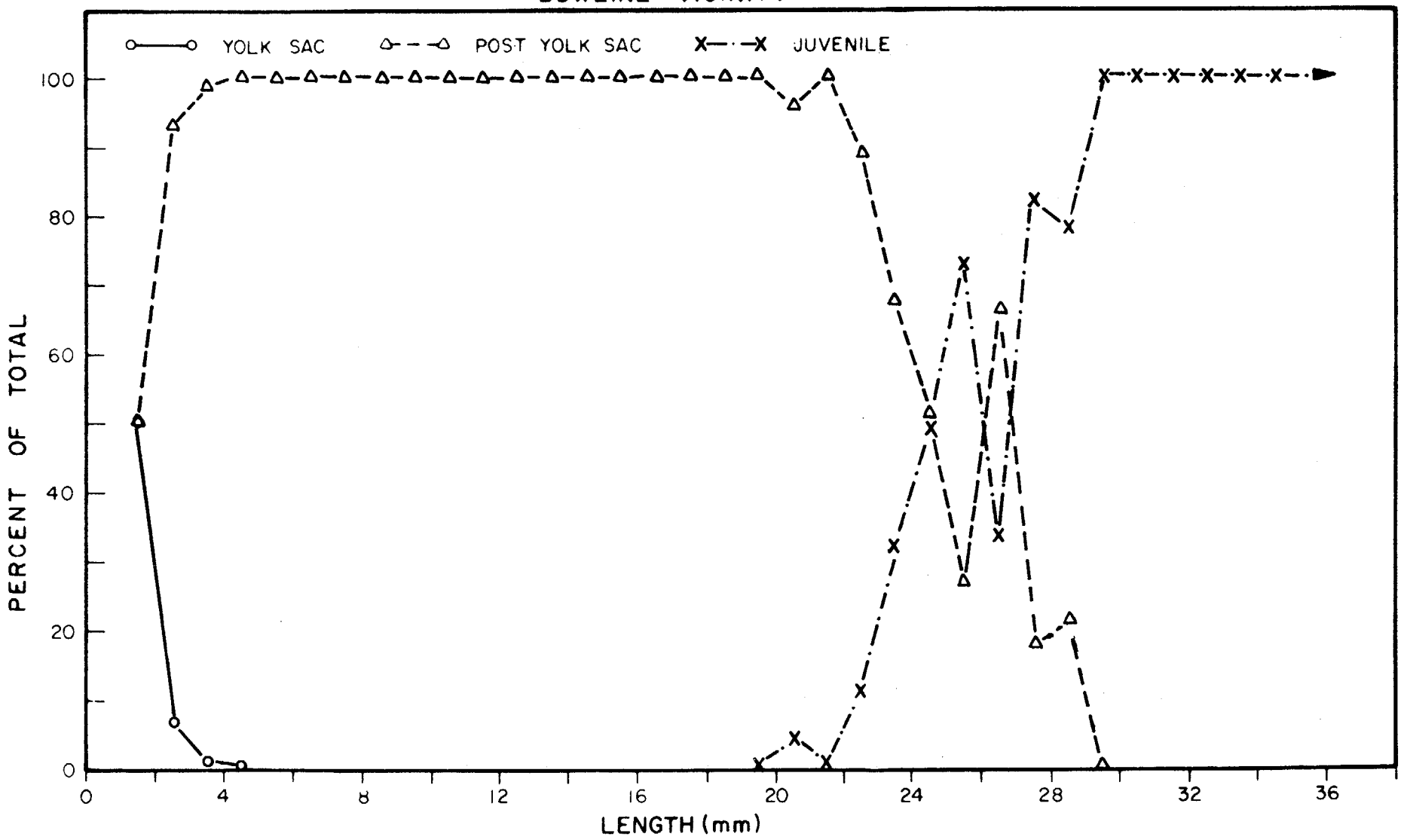


FIGURE IV-18

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

LIFE STAGE DISTRIBUTION OVER TIME FOR BAY ANCHOVY LARVAE

BOWLINE VICINITY - 1977

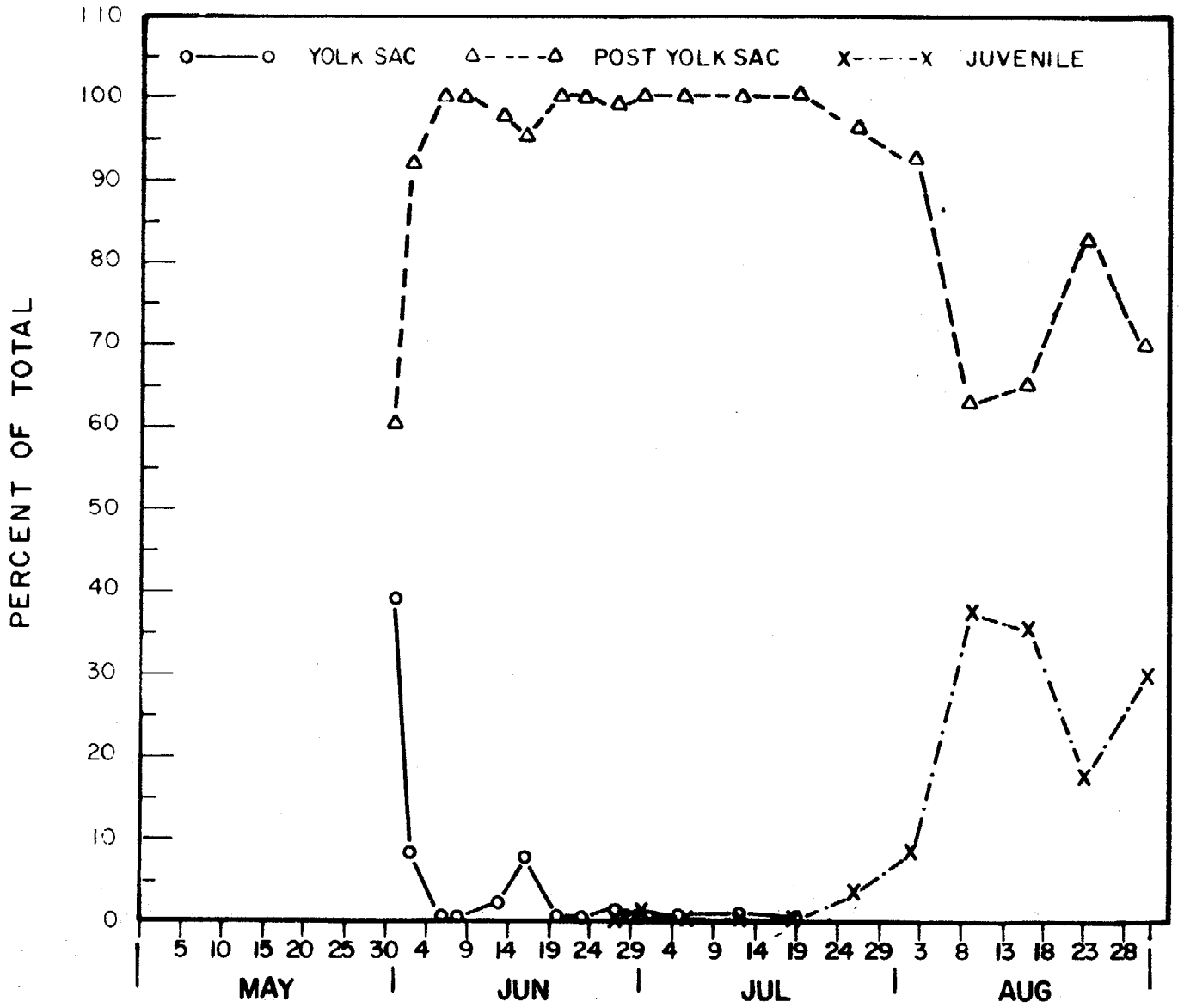


FIGURE IV-19

further upstream and the Haverstraw Bay area represents the southern fringe of their spawning grounds (O&R 1977). The other major spawning species within the Bowline Point area is the bay anchovy, which is most common in the late summer.

Other commonly found species in the ichthyoplankton include the American eel, tessellated darter, Atlantic silverside, rainbow smelt, weakfish, spottail shiner, hoghoker, and northern pipefish. These species and many others utilize Haverstraw Bay as a nursery area, although their abundances were much lower than the previously mentioned species (Table IV-10).

(ii) White Perch

White perch larval distribution in 1977 followed the same temporal pattern exhibited in previous years: presence in the area from early May through early August, with peak abundance in early June (Figure IV-20). However, the magnitude and duration of the peak were reduced in 1977. The seasonal average concentration of 22 larvae/1000 m^3 (Table IV-11) compared closely to the value observed in 1974 (21 larvae/1000 m^3) but was less than the other years, as shown below.

Seasonal Average Concentration of White Perch Larvae
(number of larvae/1000 m^3)

Year	1973*	1974*	1975*	1976*	1977
Concentration	56	21	104	39	22

(iii) Striped Bass

Like that of the white perch, the distribution of striped bass larvae in 1977 followed the same temporal patterns

*From O&R 1977

TABLE IV-10

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

OCCURRENCE OF ICHTHYOPLANKTON SPECIES

BOWLINE VICINITY - 1973-1977

SPECIES	1977							1976							1975							1974											1973						
	FEB	MAR	APR	MAY	JUN	JUL	AUG	FEB	MAR	APR	MAY	JUN	JUL	AUG	FEB	MAR	APR	MAY	JUN	JUL	AUG	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	FEB	MAR	APR	MAY	JUN	JUL	AUG
UID Ammodytidae	X	X	X																																				
UID Antherinidae					X	X	X																										X	X		X	X	X
UID Centrarchidae					X	X																													X	X	X	X
UID Clupeidae					X	X																																
UID Cyprinidae				X	X	X																																
UID Syngnathidae						X	X																												X	X	X	X
Alosa sp.			X	X	X	X	X			X	X	X	X	X				X	X	X			X	X	X	X									X	X	X	
Fundulus sp.					X	X	X						X	X												X	X									X	X	X	X
Lepomis sp.					X	X														X						X	X	X										
Menidia sp.					X	X																														X	X	X
Morone spp.				X	X	X																																
Notropis sp.					X																					X	X									X	X	
Paralichthys spp.					X																																	
Syngnathus sp.							X																													X	X		X
American eel		X	X	X	X	X	X		X	X	X	X		X		X	X	X	X	X	X		X	X	X										X	X	X	X
American sand lance																X	X																					X	X
Atlantic silverside					X	X						X	X	X					X	X	X						X	X										
Atlantic tomcod	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X							X	X	
Banded killifish						X																																
Bay anchovy				X	X	X	X					X	X	X	X					X	X	X		X	X	X	X	X	X							X		X
Blueback herring							X																X														X	X
Bluefish					X																					X												
Catfish																										X												
Gizzard shad													X																								X	X	X
Hogchoker					X	X	X													X	X					X	X	X	X	X	X						X		
Largemouth bass						X																																
Mummichog																										X												
Needlefish																											X											
Northern pipefish						X	X							X						X	X					X	X										X	
Northern searobin									X																														
Pumpkinseed																				X																			
Rainbow smelt	X		X	X	X	X	X			X	X	X	X	X		X	X	X	X	X				X	X	X													
Redbreast sunfish					X																																	
Rough silverside					X	X																																
Spottail shiner													X													X												
Striped bass				X	X	X	X				X	X	X	X				X	X	X	X			X	X	X	X											
Sturgeon																				X																		
Summer flounder											X						X																						
Tessellated darter				X	X						X	X						X	X	X			X	X	X	X	X											
Tidewater silverside					X	X	X																															
Weakfish							X						X	X				X	X							X	X	X	X									
White catfish													X																										
White perch				X	X	X					X	X	X	X		X		X	X	X	X		X	X	X	X												
Winter flounder					X											X	X																					
Yellow perch				X							X							X																				

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF WHITE PERCH LARVAE

BOWLINE VICINITY – 1973-1977

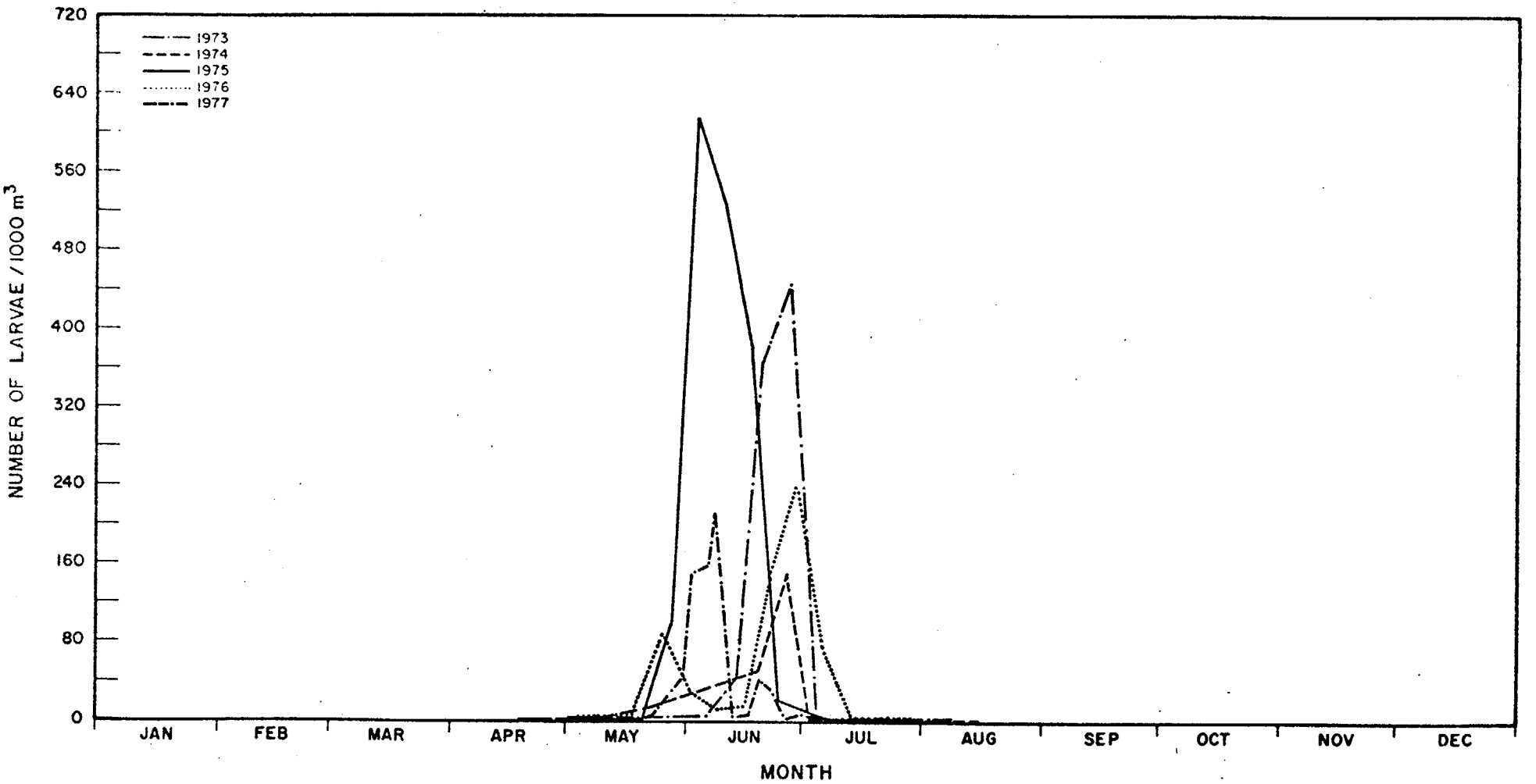


TABLE IV-11

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE OF WHITE PERCH LARVAE*

BOWLINE VICINITY - 1977

DATES	BW	BCH	BE	MEAN
17-23 APR	0	NS	NS	0
24-30 APR	0	NS	NS	0
1- 7 MAY	1	NS	NS	1
8-14 MAY	0	NS	NS	0
15-21 MAY	0	NS	NS	0
22-28 MAY	7	NS	NS	7
29 MAY-4 JUN	101	138	56	98
5-11 JUN	88	186	294	189
12-18 JUN	16	2	6	8
19-25 JUN	30	44	46	40
26 JUN-2 JUL	4	8	7	6
3- 9 JUL	7	10	2	6
10-16 JUL	0	1	2	1
17-23 JUL	0	1	0	0
24-30 JUL	0	0	0	0
31 JUL-6 AUG	0	NS	NS	0
WEEKS OF SEASON:				16
SEASON AVERAGE CONC:				22

NS = No sample
*Concentration does not include juveniles; number of larvae per 1000 m^3; Morone spp. allocated to either striped bass or white perch

exhibited in previous years. Larvae were present in the Bowline Point vicinity from early May through August, with peak abundance observed in early June. The presence of a few juvenile striped bass throughout August 1977 (Table IV-5) indicated that they remained within the study area throughout the summer. The magnitude of the peak abundance in 1977 was comparable to those of previous years (Figure IV-21). The seasonal average concentration of 75 larvae/ 1000 m^3 (Table IV-12) was second only to the average concentration recorded for 1973 (103 larvae/ 1000 m^3) as shown below.

Seasonal Average Concentration of Striped Bass Larvae
(number of larvae/1000 m^3)

Year	1973*	1974*	1975*	1976*	1977
Concentration	103	65	57	59	75

(iv) Atlantic Tomcod

Atlantic tomcod larval distribution throughout 1977 followed the same trends exhibited in previous years (1974-1976). A bimodal distribution with peaks approximately three weeks apart was found in 1975, 1976 and 1977 (Figure IV-22). In 1977, the magnitude of the second peak (2,567 larvae/1000 m^3) was five times as large as that of the first peak and more than double the previously recorded maximum.

Atlantic tomcod larvae (yolk-sac and post-yolk-sac) concentrations were minimal or absent in the Bowline Point vicinity from early April through May, when the more mobile juvenile stage returned to the area.

*From O&R 1977

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF STRIPED BASS LARVAE

BOWLINE VICINITY – 1973-1977

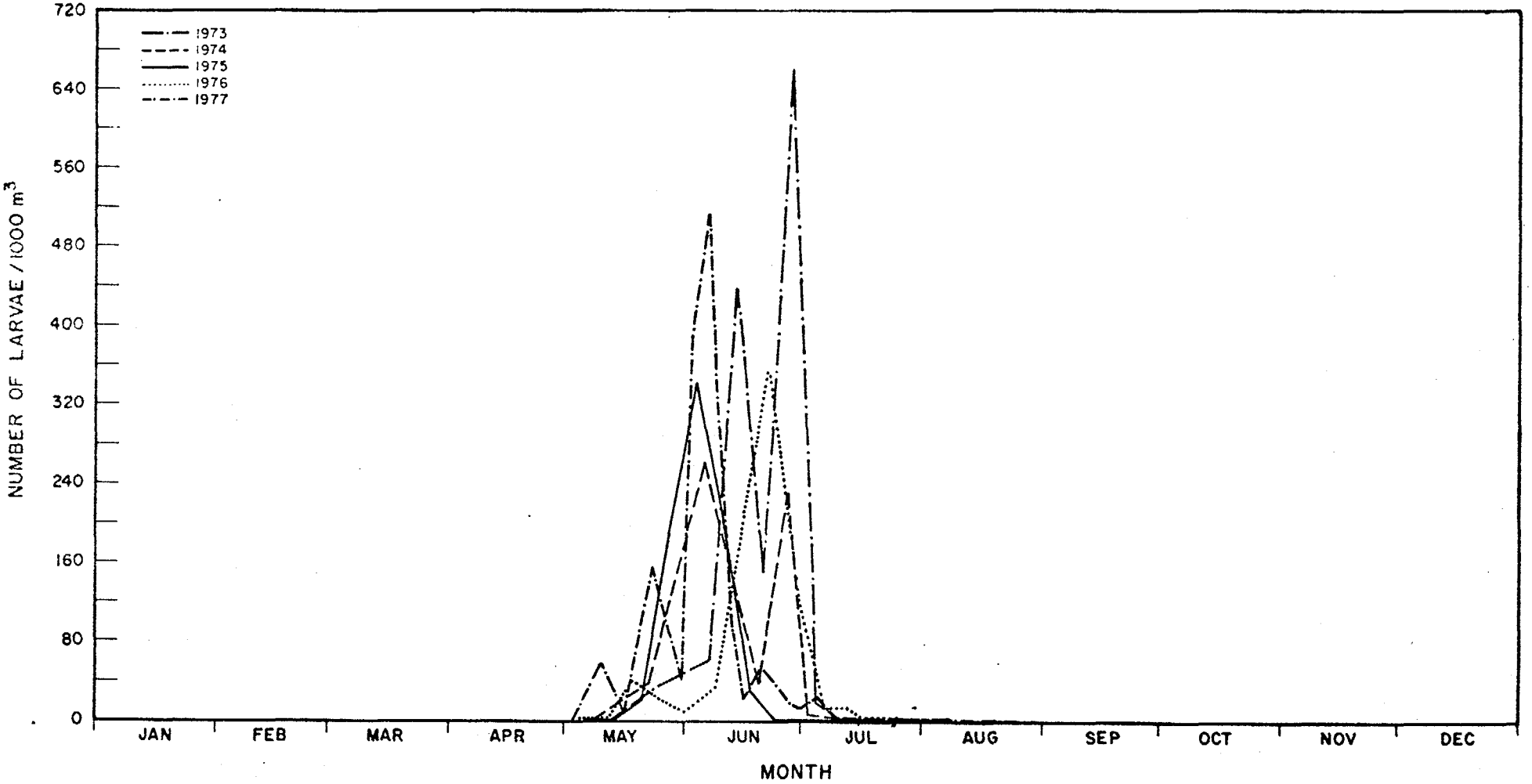


FIGURE IV-21

TABLE IV-12

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE OF STRIPED BASS LARVAE*

BOWLINE VICINITY - 1977

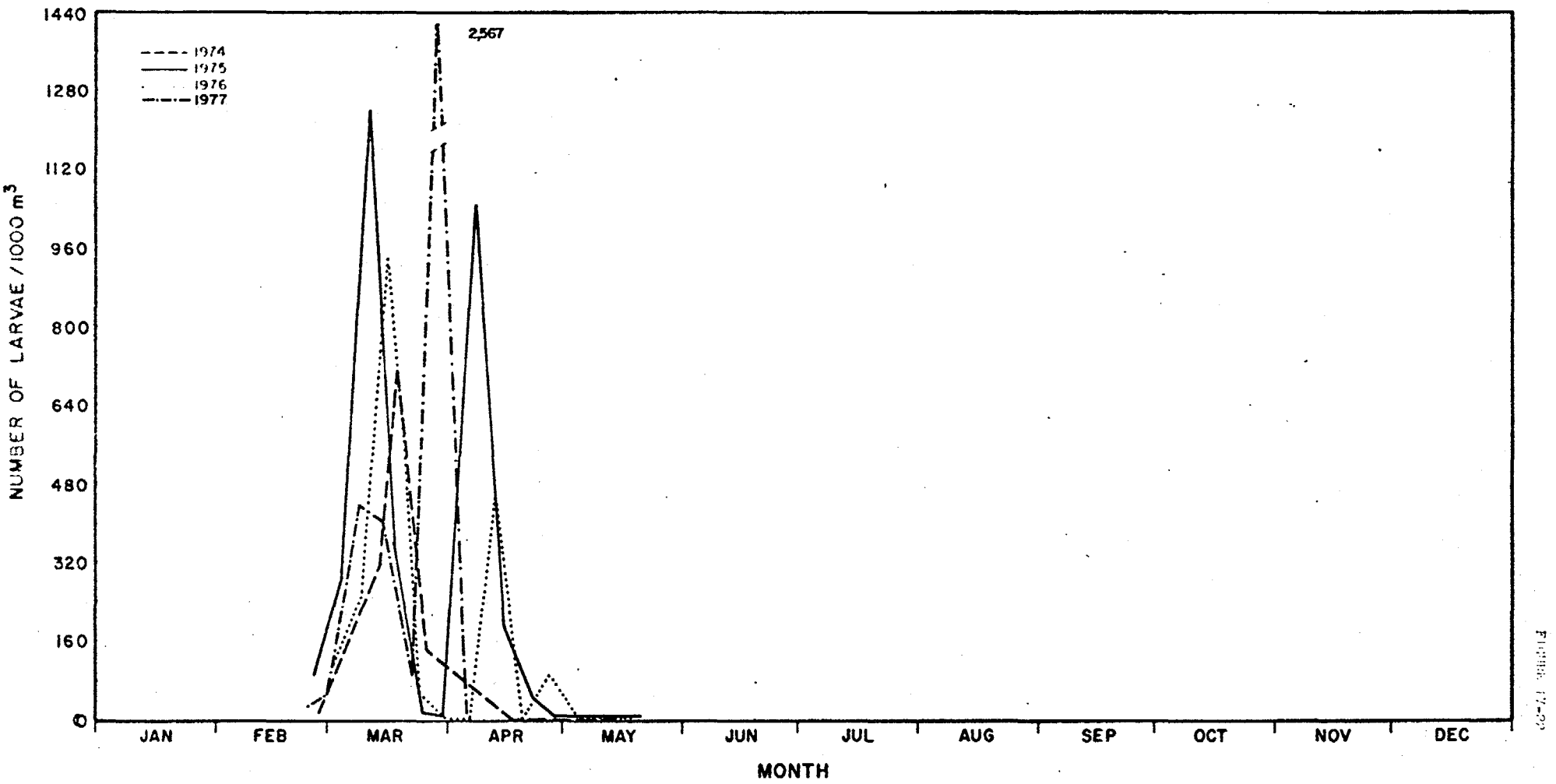
DATES	BW	BCH	BE	MEAN
1- 7 MAY	0	NS	NS	0
8-14 MAY	62	NS	NS	62
15-21 MAY	13	NS	NS	13
22-28 MAY	156	NS	NS	156
29 MAY-4 JUN	290	313	56	220
5-11 JUN	226	466	632	441
12-18 JUN	156	16	10	61
19-25 JUN	28	38	90	52
26 JUN-2 JUL	34	18	8	20
3- 9 JUL	13	35	33	27
10-16 JUL	0	0	0	0
17-23 JUL	1	1	0	1
24-30 JUL	0	0	0	0
31 JUL-6 AUG	0	NS	NS	0
WEEKS OF SEASON:				14
SEASON AVERAGE CONCENTRATION				75

NS = No sample
*Concentration does not include juveniles; number of larvae per 1000 m^3; Morone spp. allocated to either striped bass or white perch

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF ATLANTIC TOMCOD LARVAE

BOWLINE VICINITY—1974-1977



The seasonal average concentration of 279 larvae/1000 m^3 (Table IV-13) for 1977 was the largest average concentration recorded as shown below:

Seasonal Average Concentration of Atlantic Tomcod Larvae
(number of larvae/1000 m^3)

Year	1974*	1975*	1976*	1977
Concentration	115	256	152	279

(v) Alosa spp.

Temporal distribution of Alosa spp. larvae in 1977 followed the same patterns exhibited in previous years (1974-1976) although the magnitude of the abundance was much reduced (Figure IV-23). Alosa spp. abundance maintained a relatively consistent low level from early May through mid-June.

The seasonal average concentration for 1977 was 8 larvae/1000 m^3 (Table IV-14), close to the seasonal average recorded for 1975 (11 larvae/1000 m^3) but much reduced from the 1976 average of 43 larvae/1000 m^3. As shown below, the seasonal averages for the Bowline vicinity have ranged from 8 to 43 larvae/1000 m^3.

Seasonal Average Concentration of Alosa spp. Larvae
(number of larvae/1000 m^3)

Year	1974*	1975*	1976*	1977
Concentration	17	11	43	8

(vi) Bay Anchovy

Bay anchovy abundance in the Hudson River has been found to be related to the location of the salt front (O&R 1977). The presence of the salt front within Haverstraw Bay throughout the late summer (Figure III-6); concomitant with the bay

*From O&R 1977

TABLE IV-13

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE OF ATLANTIC TOMCOD LARVAE*

BOWLINE VICINITY - 1977

DATES	BW	BCH	BE	MEAN
20-26 FEB	16	30	48	31
27 FEB-5 MAR	68	NS	NS	68
6-12 MAR	520	548	265	444
13-19 MAR	557	308	367	411
20-26 MAR	99	NS	NS	99
27 MAR-2 APR	931	4749	2022	2567
3- 9 APR	4	NS	NS	4
10-16 APR	0	NS	NS	0
17-23 APR	0	NS	NS	0
24-30 APR	1	NS	NS	1
1- 7 MAY	1	NS	NS	1
8-14 MAY	0	NS	NS	0
15-21 MAY	0	NS	NS	0
WEEKS OF SEASON:				13
SEASON AVERAGE CONCENTRATION				279

NS = No sample
*Concentration does not include juveniles; number of larvae per 1000 m^3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF *ALOSA* SPP. LARVAE

BOWLINE VICINITY—1974-1977

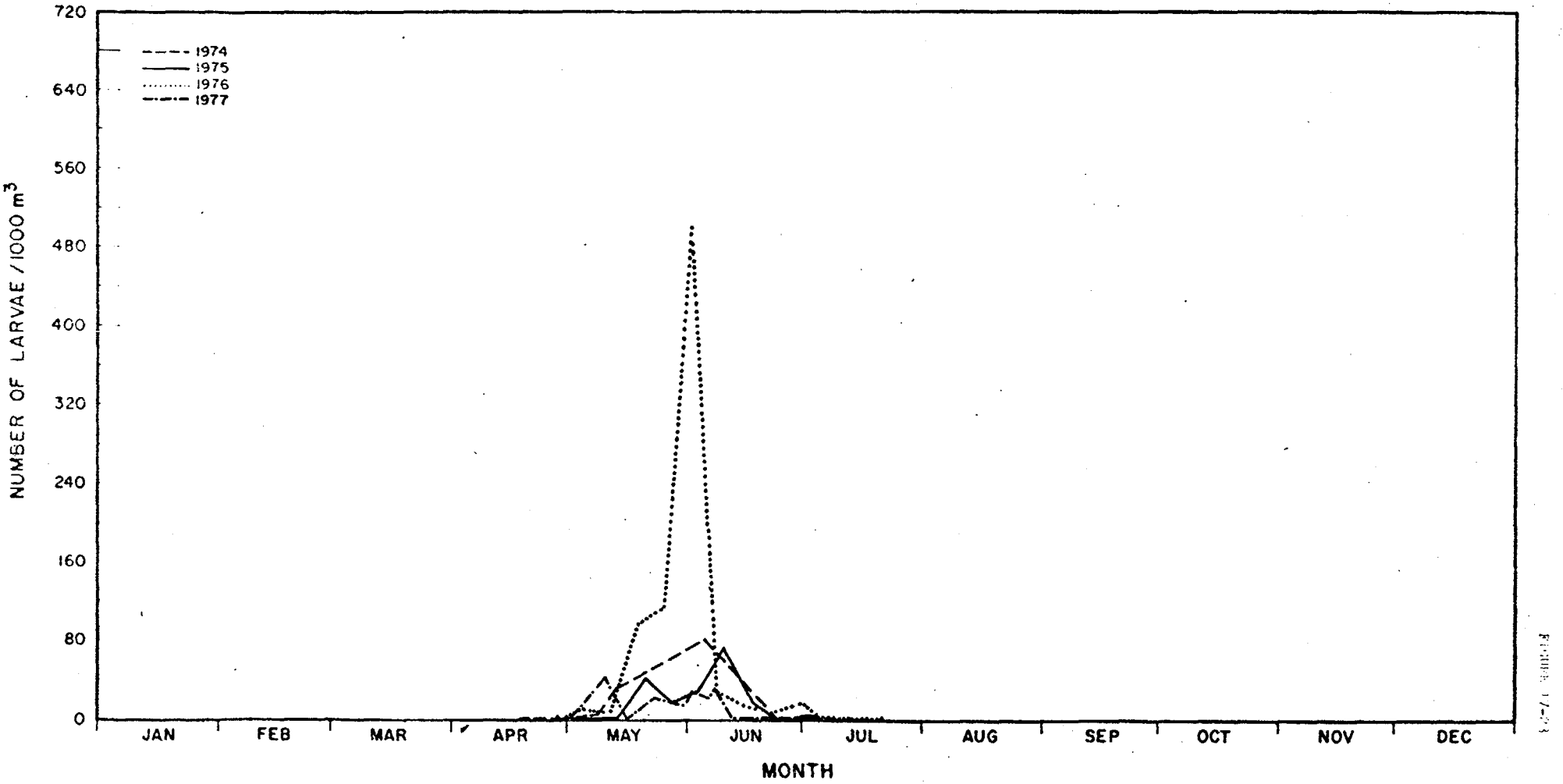


TABLE IV-14

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE OF ALOSA SPP. LARVAE*

BOWLINE VICINITY - 1977

DATES	BW	BCH	BE	MEAN
20-26 MAR	0	NS	NS	0
27 MAR-2 APR	0	0	0	0
3- 9 APR	0	NS	NS	0
10-16 APR	0	NS	NS	0
17-23 APR	0	NS	NS	0
24-30 APR	0	NS	NS	0
1- 7 MAY	10	NS	NS	10
8-14 MAY	46	NS	NS	46
15-21 MAY	6	NS	NS	6
22-28 MAY	26	NS	NS	26
29 MAY-4 JUN	39	10	28	26
5-11 JUN	43	28	20	30
12-18 JUN	1	0	4	2
19-25 JUN	2	2	2	2
26 JUN-2 JUL	1	0	0	0
3- 9 JUL	0	0	0	0
10-16 JUL	0	0	0	0
17-23 JUL	0	0	0	0
24-30 JUL	0	0	0	0
WEEKS OF SEASON:				19
SEASON AVERAGE CONCENTRATION				8

NS = No sample
*Concentration does not include juveniles; number of larvae per 1000 m^3

anchovy spawn, was most likely responsible for the high bay anchovy larval concentrations recorded in the Bowline vicinity (Figure IV-24). The pattern of distribution, a single dominant peak in July, followed the same trends exhibited in previous years (Figure IV-24).

The seasonal average concentration for bay anchovy larvae in 1977 was 976 larvae/1000 m^3 (Table IV-15), the largest seasonal average concentration recorded for bay anchovy since the studies began.

Seasonal Average Concentration of Bay Anchovy Larvae
(number of larvae/1000 m^3)

Year	1974*	1975*	1976*	1977
Concentration	922	679	243	976

*From O&R 1977

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN ABUNDANCE OF BAY ANCHOVY LARVAE

BOWLINE VICINITY—1974-1977

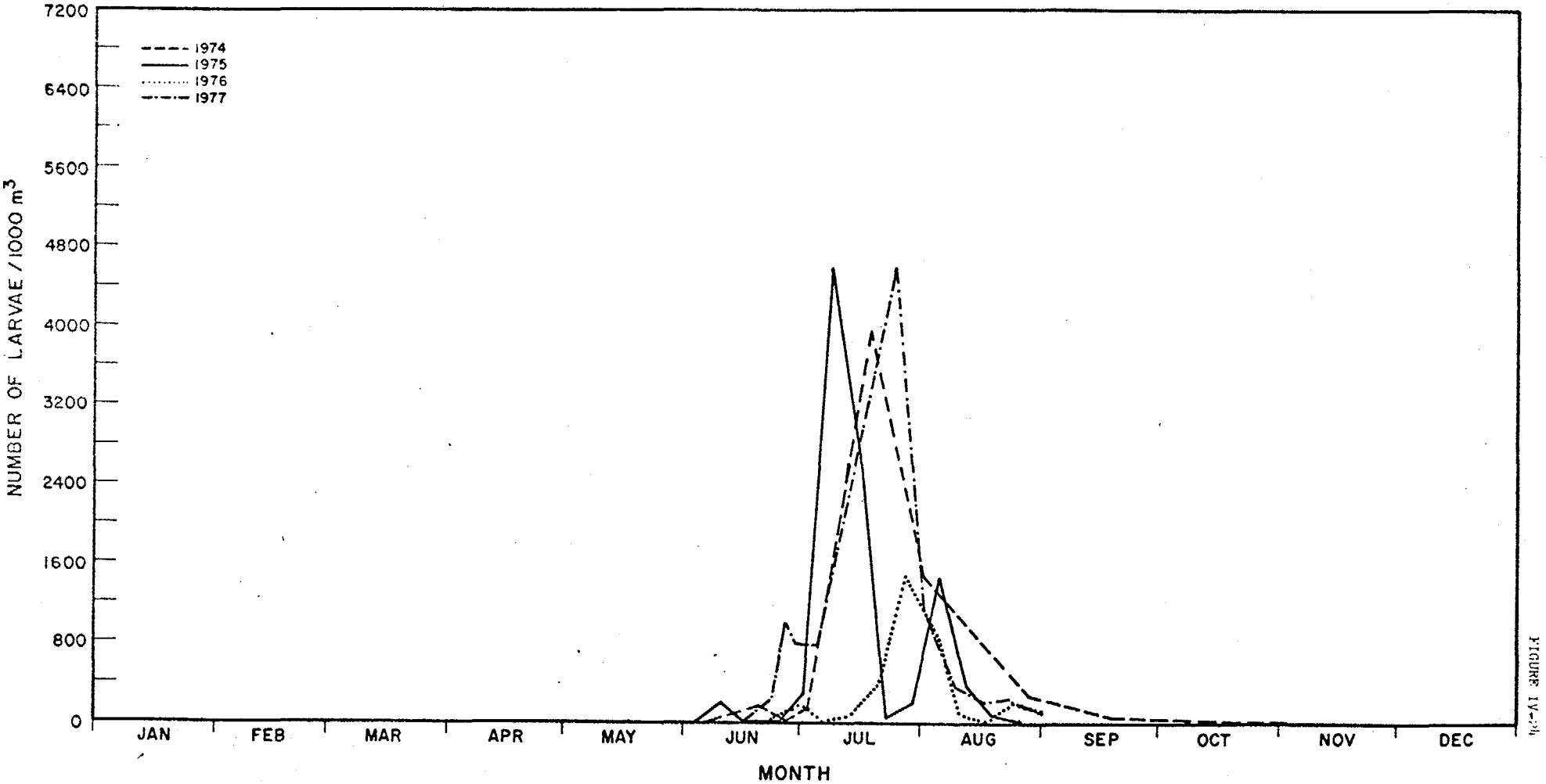


FIGURE IV-41

TABLE IV-15

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE OF BAY ANCHOVY LARVAE*

BOWLINE VICINITY - 1977

DATES	BW	BCH	BE	MEAN
15-21 MAY	0	NS	NS	0
22-28 MAY	0	NS	NS	0
29 MAY-4 JUN	6	8	8	7
5-11 JUN	16	20	12	16
12-18 JUN	30	26	39	32
19-25 JUN	324	183	178	228
26 JUN-2 JUL	641	493	1704	946
3- 9 JUL	1510	382	566	819
10-16 JUL	1838	1787	2970	2198
17-23 JUL	3279	4318	2725	3441
24-30 JUL	4265	5494	5054	4938
31 JUL-6 AUG	1138	NS	NS	1138
7-13 AUG	400	NS	NS	400
14-20 AUG	233	NS	NS	233
21-27 AUG	240	NS	NS	240
WEEKS OF SEASON:				15
SEASON AVERAGE CONCENTRATION				976

NS = No sample
*Concentration does not include juveniles; number of larvae per 1000 m^3

B. PLANT ICHTHYOPLANKTON

1. Introduction

The entrainment abundance studies were performed by Ecological Analysts, Inc. for Orange and Rockland Utilities, Inc. and are briefly summarized herein.

The abundance data for the three selected species, white perch, striped bass and Atlantic tomcod, at the Bowline intake are presented by date of collection, time of day and depth in the water column. The data represent the full period of occurrence of a species except when limited by the duration of the sampling program.

2. Methods and Materials

Entrainment abundance sampling was performed during periods of Atlantic tomcod, white perch or striped bass larval presence at the intake (Table IV-16). Surface, middle, and bottom depths were sampled simultaneously with three 0.5-m, 505 μ mesh conical plankton nets which were lowered on a rigid frame parallel to and in front of the Unit 1 trash racks (Figure IV-25). Two consecutive 30-minute samples were collected at both noon and midnight, generally concurrent with pond tows. At the completion of each 30-minute collection period the nets were thoroughly rinsed into the cod-end container. The sample was then transferred to a labeled 800-ml glass jar and preserved with 10 percent formalin.

The volume of water filtered during each sample period was used to convert abundance data to organism densities. Through-net velocities measured with a Cushing electromagnetic flowmeter were used to develop an intake water flow velocity (cm/sec) matrix (Table IV-17). Flowmeter values were recorded over a range of tidal and

TABLE IV-16

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SAMPLING DATES FOR THE 1977 BOWLINE POINT ENTRAINMENT ABUNDANCE PROGRAM

BOWLINE POINT GENERATING STATION - 1977

		DAY			NIGHT		
Dates	Depths	S	M	B	S	M	B
8 MAR 77		2x	2x	2x	2x	2x	2x
15 MAR 77		2x	2x	2x	2x	2x	2x
22 MAR 77		2x	2x	2x			
29 MAR 77		2x	2x	2x	2x	2x	2x
31 MAY 77		2x	2x	2x	2x	2x	2x
2 JUN 77		2x	2x	2x	2x	2x	2x
6 JUN 77		2x	2x	2x	2x	2x	2x
8 JUN 77		2x	2x	2x	2x	2x	2x
13 JUN 77		2x	2x	2x	2x	2x	2x
16 JUN 77		2x	2x	2x	2x	2x	2x
20 JUN 77		2x	2x	2x	2x	2x	2x
23 JUN 77		2x	2x	2x	2x	2x	2x
27 JUN 77		2x	2x	2x	2x	2x	2x
30 JUN 77		2x	2x	2x	2x	2x	2x
5 JUL 77		2x	2x	2x	2x	2x	2x
12 JUL 77		2x	2x	2x	2x	2x	2x

S = Surface
M = Mid depth
B = Bottom
2x = Two consecutive 30 minute samples

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FIGURE IV-25

ICHTHYOPLANTON SAMPLING APPARATUS

BOWLINE POINT GENERATING STATION - 1977

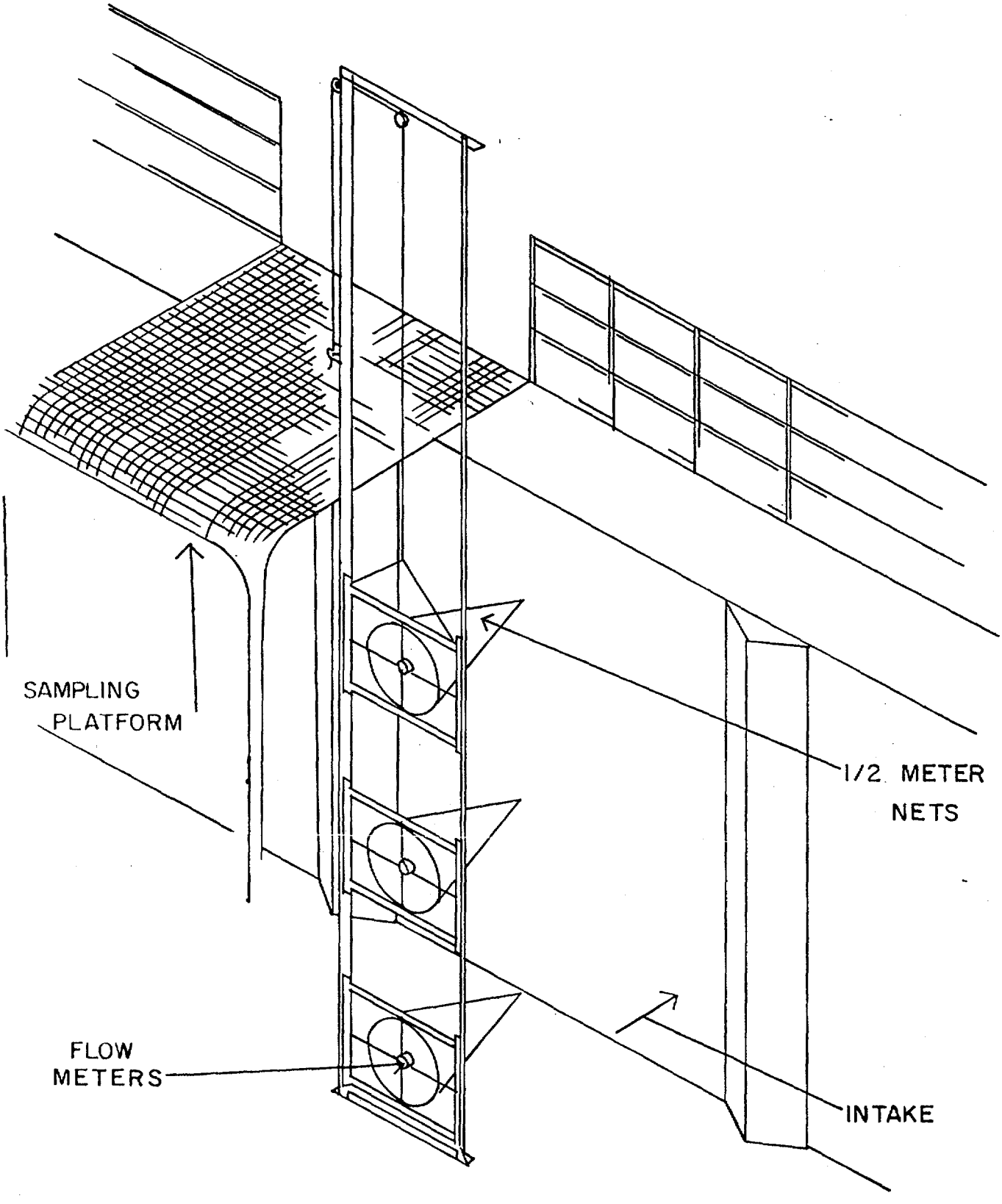


TABLE IV-17

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BOWLINE POINT PLANT INTAKE THROUGH-NET VELOCITIES AS A FUNCTION OF TIDAL HEIGHT, CIRCULATOR PUMP OPERATION, AND SAMPLING DEPTH

BOWLINE POINT GENERATING STATION - 1977

TIDAL HEIGHT RANGE (m)	INTAKE THROUGH NET VELOCITIES (cm/sec) (-0.5)-(-0.1)	(0.0)-(+0.3)	(+0.4)-(+0.7)	(+0.8)-(+1.1)
Pump operation		2 Pumps Full[a]		
Depth				
Surface	10.7±1.4[b]	10.4±2.6	10.7±1.6	9.3±1.4
Middle	12.8±2.3	10.2±1.0	12.4±4.3	10.2±1.3
Bottom	15.4±2.3	12.8±3.8	13.7±1.9	10.9±3.8
Pump operation		2 Pumps Throttled[a]		
Depth				
Surface	9.0[c]	9.5[c]	7.3[c]	6.4[c]
Middle	10.9[c]	9.3[c]	8.6[c]	7.0[c]
Bottom	13.1±1.1	11.6±0.5	9.4±1.9	7.5[c]
Pump operation		3 Pumps Full		
Depth				
Surface	10.6[c]	12.6[c]	10.3[c]	10.8[c]
Middle	12.8±0.6[c]	12.4±0.9[c]	11.9±0.5[c]	11.9±0.6[c]
Bottom	15.3[c]	15.7[c]	13.1[c]	12.6[c]

[a] Includes various combinations of the three Unit 1 circulator pumps.
[b] Mean ± standard deviation.
[c] Indicates values extrapolated based on depth/tide relationships for two-pump full operation.

plant operating conditions for each sample depth (i.e., surface, middle and bottom). These values were then used to estimate volume of water filtered at each sample depth for a sample under any observed combination of tidal and plant operating conditions, according to the following relationship:

$$V = A \times t \times v$$

where

A = net cross-sectional area in m^2
t = sample duration in minutes
v = flow velocity through nets in m/minute.

During each collection the flowmeter was attached alternately to the middle or bottom net to determine if clogging of the net surface had occurred.

Samples were preserved onsite in separate 800-ml glass jars with 10 percent formalin and transported to laboratory facilities for initial workup and quality control analysis. In the laboratory, samples were transferred to blackened pyrex trays, sorted, and enumerated by life stage. Ichthyoplankton specimens were removed from each sample, placed in vials according to life stage and preserved with 5 percent formalin. Each vial specimen was identified to family or species depending on the level of precision required. Identification was facilitated by available literature and an ichthyoplankton reference collection.

3. Results and Discussion

a. White Perch

White perch eggs are demersal and adhesive; therefore they are not normally found distributed throughout the water column

and are not generally susceptible to entrainment. No white perch eggs were found in any of the 1977 entrainment samples.

White perch larvae were present in intake collections throughout June and into early July, with the peak concentrations occurring from 2-8 June 1977 (Table IV-18). The white perch demonstrated no definitive diurnal pattern while spatially, the larvae concentrations were greater at the mid and bottom depths than at the surface.

b. Striped Bass

No striped bass eggs were collected in the abundance sampling performed at Bowline throughout the 1977 program. Striped bass larval distribution was similar to that exhibited by the congeneric white perch with peak abundance occurring in early June and lasting approximately a week (Table IV-19). As evidenced with white perch, striped bass demonstrated no definitive diurnal pattern but were found to be in deeper water (mid or bottom depths).

c. Atlantic Tomcod

Altantic tomcod eggs are demersal and adhesive; therefore they are not susceptible to entrainment and were not present in Bowline intake collections during 1977. Altantic tomcod larvae were present at the intake throughout the month of March with peak abundances occurring in mid-March (Table IV-20) when the larvae were approximately 7-8 mm in total length. As may be expected at this early stage, the Atlantic tomcod larvae exhibited no distinct distribution by time of day and depth.

TABLE IV-18

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WHITE PERCH ENTRAINMENT ABUNDANCE*

BOWLINE POINT GENERATING STATION - 1977

	DAY				NIGHT				DATE
DATE	SURFACE	MID	BOTTOM	MEAN	SURFACE	MID	BOTTOM	MEAN	MEAN
31 MAY 77	0	0	0	0	0	11.9	0	4.0	2.0
2 JUN 77	0	0	18.9	6.3	0	61.0	18.9	26.6	16.5
6 JUN 77	0	48.3	154.5	67.6	0	107.0	21.6	42.9	55.2
8 JUN 77	13.2	33.1	92.1	46.1	13.2	121.4	92.1	75.6	60.9
13 JUN 77	0	0	0	0	0	0	0	0	0
16 JUN 77	0	0	10.4	3.4	0	0	0	0	1.7
20 JUN 77	0	0	10.4	3.4	0	0	0	0	1.7
23 JUN 77	0	13.9	0	4.6	0	0	11.0	3.7	4.2
27 JUN 77	0	0	0	0	0	11.4	0	3.8	1.9
30 JUN 77	0	0	0	0	0	0	0	0	0
5 JUL 77	0	0	9.0	3.0	0	0	18.5	6.2	4.6
12 JUL 77	0	0	0	0	0	0	0	0	0

*Larval abundance (yolk-sac and post-yolk-sac) as number per 1000 cubic meters

TABLE IV-19

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

STRIPED BASS ENTRAINMENT ABUNDANCE*

BOWLINE POINT GENERATING STATION - 1977

	DAY				NIGHT				DATE
DATE	SURFACE	MID	BOTTOM	MEAN	SURFACE	MID	BOTTOM	MEAN	MEAN
31 MAY 77	0	0	0	0	0	0	11.2	3.7	1.9
2 JUN 77	0	0	37.9	12.6	0	630.1	549.2	393.1	202.9
6 JUN 77	0	391.2	269.7	220.3	0	168.2	152.8	107.0	163.6
8 JUN 77	0	0	202.6	67.5	13.2	353.2	294.7	220.4	143.9
13 JUN 77	0	0	9.2	3.1	0	0	31.1	10.4	6.7
16 JUN 77	13.2	0	0	4.4	0	13.9	13.0	9.0	6.7
20 JUN 77	0	0	0	0	0	13.9	0	4.6	2.3
23 JUN 77	0	0	0	0	0	0	0	0	0
27 JUN 77	0	0	0	0	0	0	0	0	0
30 JUN 77	0	0	0	0	0	0	11.2	3.7	1.9
5 JUL 77	0	0	0	0	0	11.1	9.3	6.8	3.4
12 JUL 77	0	0	0	0	0	0	0	0	0

*Larval abundance (yolk-sac and post-yolk-sac) as number per 1000 cubic meters

TABLE IV-20

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ATLANTIC TOMCOD ENTRAINMENT ABUNDANCE[a]

BOWLINE POINT GENERATING STATION - 1977

	DAY				NIGHT				DATE
DATE	SURFACE	MID	BOTTOM	MEAN	SURFACE	MID	BOTTOM	MEAN	MEAN
8 MAR 77	19.4	33.0	90.1	47.5	283.0	78.1	140.7	167.3	107.4
15 MAR 77	232.6	1534.6	2762.8	1510.0	639.5	1155.1	915.9	903.5	1206.8
22 MAR 77	88.9	203.2	189.4	160.5	NS	NS	NS	NA	60.5[b]
29 MAR 77	31.4	312.5	584.4	309.4	124.1	154.6	232.6	170.4	239.9

[a] Larval abundance (yolk-sac and post-yolk-sac) as number per 1000 cubic meters
[b] Represents only day sampling
[c] Sampling program terminated at this date due to lack of larvae during subsequent surveys
NS - No sample
NA - Not applicable

C. ENTRAINMENT INVOLVEMENT

1. Introduction

The data generated by the ichthyoplankton studies conducted in the Bowline Point area of the Hudson River and at the Bowline Point intake have been compared to evaluate the susceptibility of the ichthyoplankton community in this reach of the river to entrainment. Two methods of calculating involvement were utilized to guard against possible bias associated with any one method of data treatment. The close agreement between methods supports the final conclusions.

In the first method, as utilized in O&R 1977, the mean concentration of larvae for each of the selected species collected at the intake has been compared with the mean concentrations collected in the river to ascertain what effect the plant may be having on that early life history phase. The annual mean concentration in plant and river collections is compared for the 1977 study period. These values in turn are contrasted with results presented in O&R, 1977.

The second data treatment utilized the methodology employed to determine the entrainment involvement for striped bass (w-ratios) presented in Supplement I, McFadden and Lawler, 1977. The data presented herein, however, summarizes for total larvae (yolk-sac and post-yolk-sac) rather than for the individual life stages.

2. Comparison of River and Plant Abundances

a. White Perch

Since no eggs were collected at the Bowline Point intake in 1977, no comparison can be made with river abundances, and minimal plant-river involvement of this life stage can be assumed.

The ratio of the average seasonal concentration of larvae collected at the intake (Table IV-21) to the average seasonal concentration of larvae collected in the river (Table IV-11) was 0.27. Although slightly higher than those exhibited in previous years (Table IV-22), this value remains substantially less than 1.0. Corresponding ratios for 1975-1977 using an alternative calculation (McFadden and Lawler 1977) were very similar (Table IV-23).

b. Striped Bass

No striped bass eggs were collected at the Bowline intake in 1977, precluding any estimation of possible plant-river involvement.

The ratio of plant (Table IV-21) to river (Table IV-12) average seasonal concentrations of larvae was 0.40; still much less than 1.0 but higher than the previously recorded maximum ratio of 0.16 found in 1975 (Table IV-22). As demonstrated with the white perch, corresponding ratios for 1975-1977 using the alternative calculations (McFadden and Lawler, 1977) were very similar (Table IV-23).

c. Atlantic Tomcod

Distribution of tomcod larvae at the Bowline Point intake followed the same pattern as those exhibited in the river although the magnitudes were not necessarily related. Peak abundances in the river were recorded during the week of 27 March-2 April (Table IV-13), while peak abundance in the plant was recorded two weeks earlier, 13-19 March (Table IV-21). The ratio of plant to river average seasonal concentrations of larvae was 0.68, within the range of previously recorded values (Table IV-22). These values were similar to those attained using the method described in McFadden and Lawler, 1977 (Table IV-23).

TABLE IV-21

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN SEASONAL ABUNDANCE[a] OF WHITE PERCH, STRIPED BASS AND ATLANTIC TOMCOD LARVAE IN INTAKE COLLECTIONS

BOWLINE POINT GENERATING STATION - 1977

STRIPED BASS		WHITE PERCH		ATLANTIC TOMCOD	
DATE	No./1000 m^3	DATE	No./1000 m^3	DATE	No./1000 m^3
1- 7 MAY	0.0[b]	17-23 APR	0.0[b]	20-26 FEB	0.0[b]
8-14 MAY	25.6[b]	24-30 APR	1.5[b]	27 FEB-5 MAR	53.7[b]
15-21 MAY	51.2[b]	1- 7 MAY	3.1[b]	6-12 MAR	107.4
22-28 MAY	76.8[b]	8-14 MAY	4.6[b]	13-19 MAR	1206.8
29 MAY-4 JUN	102.4	15-21 MAY	6.2[b]	20-26 MAR	160.5
5-11 JUN	153.8	22-28 MAY	7.7[b]	27 MAR-2 APR	239.9[b]
12-18 JUN	6.7	29 MAY-4 JUN	9.2	3- 9 APR	205.6[b]
19-25 JUN	1.2	5-11 JUN	58.1	10-16 APR	171.4[b]
26 JUN-2 JUL	0.9	12-18 JUN	0.9	17-23 APR	137.1[b]
3- 9 JUL	3.4	19-25 JUN	2.9	24-30 APR	102.8[b]
10-16 JUL	0.0	26 JUN-2 JUL	1.0	1- 7 MAY	68.6[b]
17-23 JUL	0.0[b]	3- 9 JUL	4.6	8-14 MAY	34.3[b]
24-30 JUL	0.0[b]	10-16 JUL	0.0[b]	15-21 MAY	0.0[b]
31 JUL-1 AUG	0.0[b]	17-23 JUL	0.0[b]		
		24-30 JUL	0.0[b]		
		31 JUL-6 AUG	0.0[b]		
WEEKS OF SEASON	14		16		13
WEEK SAMPLED	7		7		4
MEAN SEASONAL ABUNDANCE:	30.1		6.2		191.4

[a] Number of larvae per 1000 cubic meters
[b] Extrapolated data

TABLE IV-22

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SEASONAL AVERAGES* OF SELECTED FISH LARVAE
TAXA IN RIVER AND INTAKE COLLECTIONS

BOWLINE POINT GENERATING STATION AND VICINITY - 1973-1977

	1973		1974		1975		1976		1977	
TAXON	PLANT	RIVER	PLANT	RIVER	PLANT	RIVER	PLANT	RIVER	PLANT	RIVER
WHITE PERCH (3rd week APR-last week in JUL)	7 (10/16)	56 (13/16)	2 (11/16)	21 (8/16)	20 (13/16)	104 (16/16)	3 (15/16)	39 (16/16)	6 (7/16)	22 (16/16)
RATIO (PLANT/RIVER)	0.12		0.10		0.19		0.08		0.27	
STRIPED BASS (1st week MAY-last week in JUL)	10 (10/14)	103 (13/14)	3 (11/14)	65 (8/14)	9 (11/14)	57 (14/14)	6 (13/14)	59 (14/14)	30 (7/14)	75 (14/14)
RATIO (PLANT/RIVER)	0.10		0.05		0.16		0.10		0.40	
ATLANTIC TOMCOD (last week FEB-3rd week in MAR)			120 (5/13)	115 (7/13)	85 (8/13)	256 (12/13)	158 (13/13)	162 (12/13)	191 (4/13)	279 (13/13)
RATIO (PLANT/RIVER)			1.04		0.33		0.98		0.68	

*Number of larvae/1000^3; average of estimated weekly means over the time periods indicated.
(n/n')=(number of weeks with surveys/total number of weeks in time period); values interpreted, extrapolated, or assumed for weeks when samples were not collected.

TABLE IV-23

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BOWLINE POINT W-RATIO CALCULATIONS[a] FOR WHITE PERCH, STRIPED BASS AND ATLANTIC TOMCOD LARVAE[b].

BOWLINE POINT GENERATING STATION - 1977

	1975	1976	1977
White perch	0.25	0.06	0.22
Striped bass	0.12	0.08	0.39
Atlantic tomcod	0.32	0.81	0.49

[a]Calculations as documented in Supplement I, McFadden and Lawler, 1977.
[b]Total larvae (yolk-sac and post-yolk-sac larvae) excluding juveniles.

D. GEAR COMPARISON STUDY

1. Introduction

A special study was designed and conducted to address the effect of two of the important variables - net diameter and tow velocity - on ichthyoplankton abundance estimates. The study was conducted over a five-day period in early June specifically to coincide with the occurrence of peak concentrations of Morone spp. larvae in the Bowline Point vicinity. The organisms under investigation were predominantly early post-yolk-sac larvae approximately 5 to 8 mm in length. At this age, mobility would be minimal.

2. Methods and Materials

a. Field Procedures

Ichthyoplankton sampling was conducted on 9, 11-12, and 14-15 June 1977 at Bowline West (BW). This station was located in 6-7 m of water between the pond inlet and the south end of the oil dock (Figure IV-1). All samples were collected at a depth of 3 m.

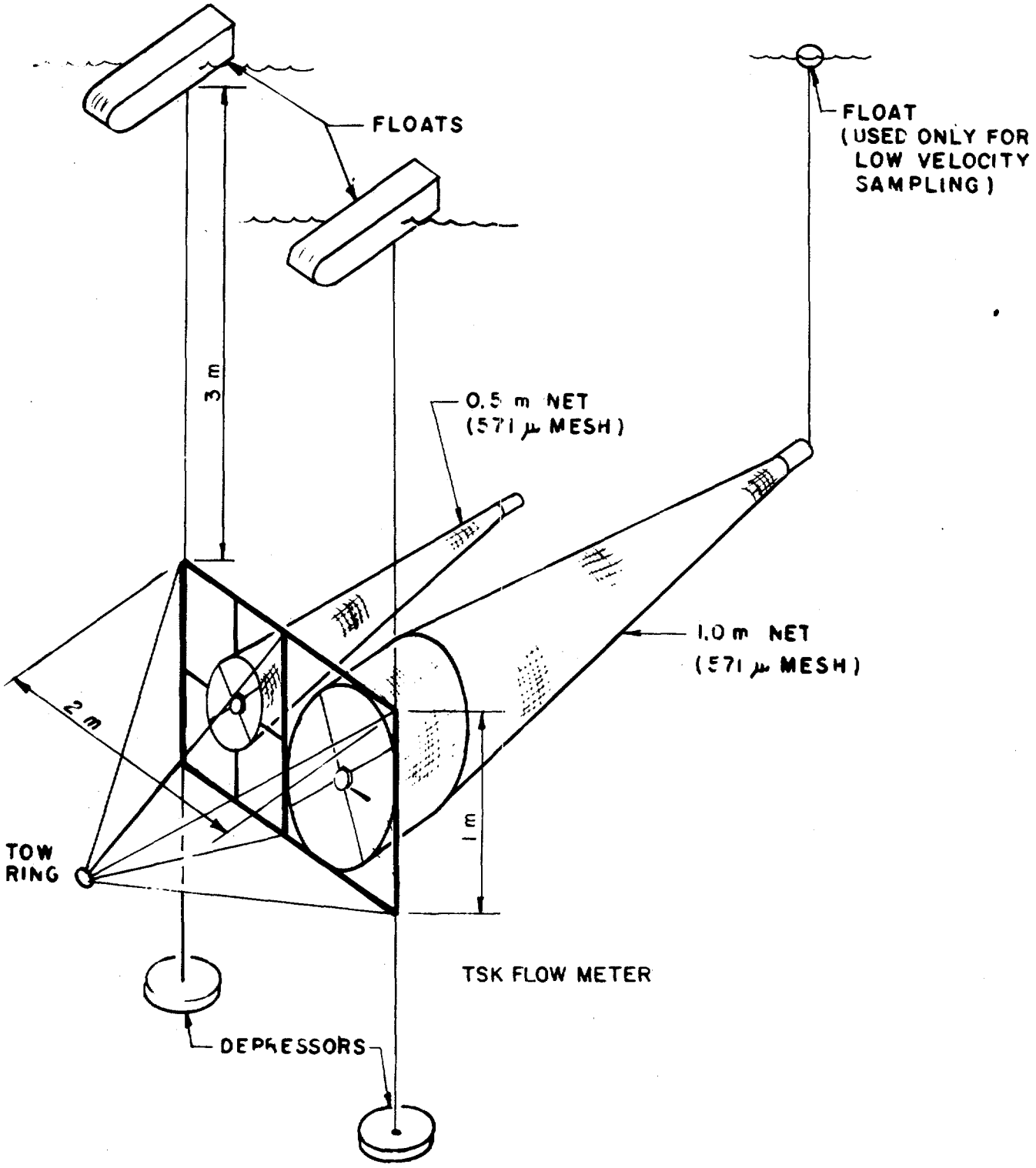
Bongo type frames were used to tow two nets simultaneously at the same depth: a 1.0-m diameter Hensen style net and a 0.5-m diameter conical net (Figure IV-26). Both nets consisted of a 571 micron mesh body. A TSK flow meter, center-mounted in each net was used to determine the volume sampled. Velocity of the net through the water was monitored using a General Oceanics flow meter towed off the side of the boat. Low velocities (<1.0 fps) were measured using a Cushing electromagnetic current meter attached to the side of the boat and positioned to the depth of the net (Figure IV-27).

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

BONGO TYPE FRAME SAMPLING APPARATUS

BOWLINE VICINITY–1977

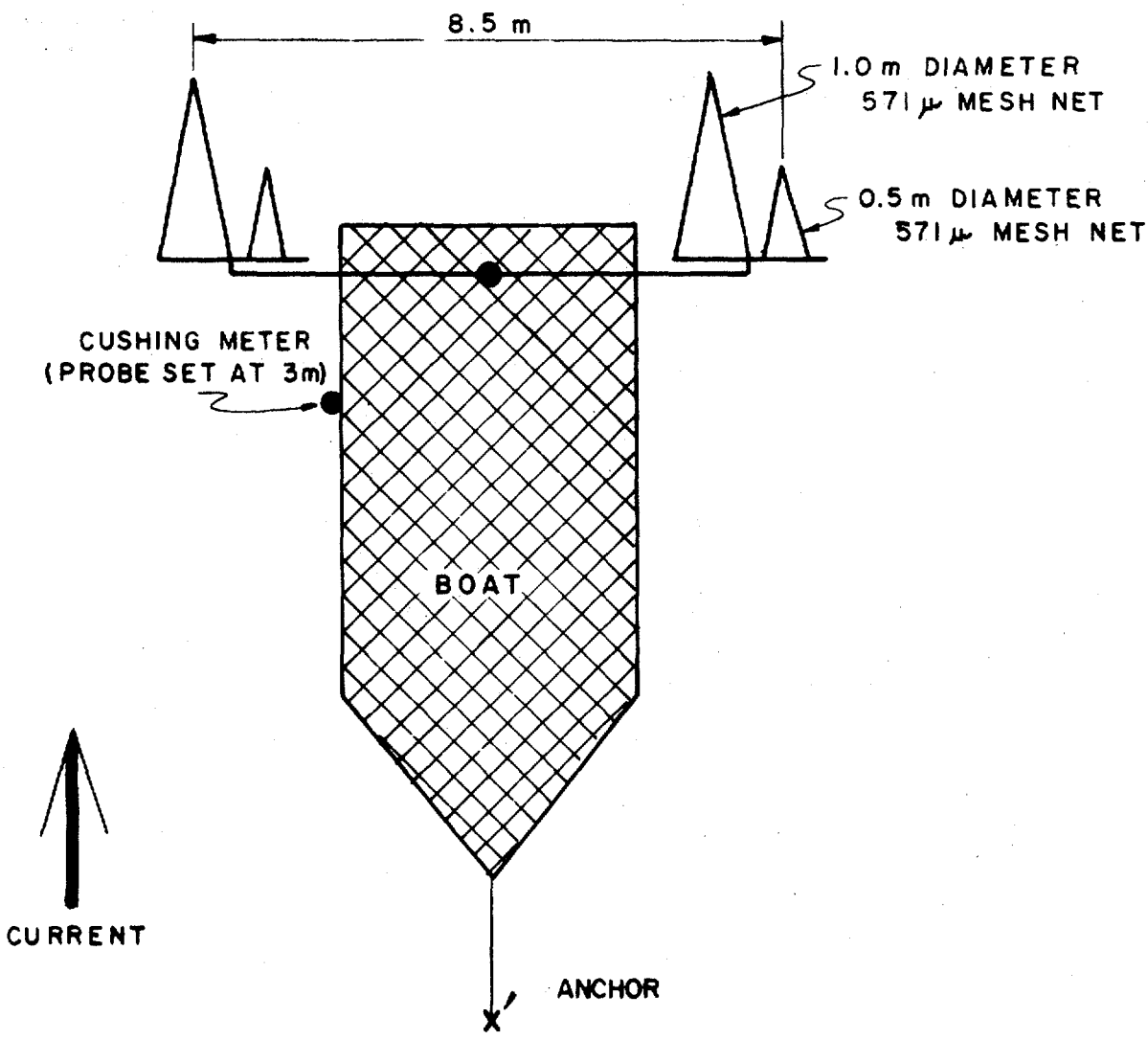


ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

SIMULTANEOUS SAMPLING ARRANGEMENT FOR LOW VELOCITY SAMPLING

BOWLINE VICINITY- 1977



Samples were collected at velocities less than 1.0 fps, approximately 1.5 fps, and 3.0 fps. Samples collected at the lowest velocities (<1.0 fps) utilized the tidal current moving past the anchored boat: to accomplish this, a bongo frame was suspended over each side of the boat, permitting the collection of four simultaneous samples (Figure IV-27). It was found that the 1.0 m Hensen net could not maintain a horizontal position at the low velocity without the aid of a flotation device attached to the cod-end bucket.

Samples collected at 1.5 and 3.0 fps also utilized the bongo type frames rigged similarly to the low velocity collections. One bongo frame (two nets) was towed 61 m behind the boat while the boat velocity through the water was maintained at the desired speed. At these higher velocities, the flotation device on the 1.0-m net cod-end bucket was not necessary to maintain the net in a horizontal orientation.

Tow durations were varied in an attempt to equalize sample volumes regardless of the tow velocities. Samples collected at velocities of <1.0 fps, 1.5 fps, and 3.0 fps were towed for 15, 10, and 5 minutes, respectively.

Simultaneous collections at different velocities were made utilizing a second boat. Concurrent with the anchored collections, the second boat towed another bongo frame, also equipped with a 1.0-m diameter Hensen net and 0.5-m diameter conical net, alongside the anchored boat. By varying collection velocities of the different vessels, simultaneous collections were made through the same water mass over different velocities and gear types. Table IV-24 outlines the experimental design utilized.

TABLE IV-24

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FREQUENCY OF ICHTHYOPLANKTON GEAR COMPARISON SAMPLING AT SELECTED VELOCITIES

BOWLINE VICINITY - JUNE 1977

DATE	TIME	VELOCITY:	LOW		MEDIUM		HIGH	
		NET SIZE:	1.0 M	0.5 M	1.0 M	0.5 M	1.0 M	0.5 M
9 JUN 1977	0700-0800		2X	2X			X	X
	0900-1000		2X	2X			X	X
11 JUN 1977	1100-1200		2X	2X			X	X
	1300-1400				2X	2X	X	X
	1400-1500				X	X	X	X
	1500-1600				2X	2X		
	1600-1700		X	X			X	X
	1700-1800		2X	2X			X	X
	2200-2300		2X	2X			X	X
	2300-2400		2X	2X			X	X
12 JUN 1977	0000-0100				2X	2X		
	0100-0200						X	X
	0200-0300				X	X	X	X
	0300-0400				X	X		
	0400-0500				X	X		
	0500-0600						X	X
	0600-0700						X	X
14 JUN 1977	1100-1200		2X	2X			X	X
	1300-1400		2X	2X			X	X
	1400-1500				X	X		
	1500-1600				2X	2X	X	X
	1600-1700				2X	2X	X	X
	1800-1900		2X	2X				
	1900-2000		2X	2X			2X	2X
	2000-2100				2X	2X	2X	2X
	2100-2200				2X	2X	X	X
	2200-2300				X	X		
	2300-2400		2X	2X			X	X
15 JUN 1977	0000-0100		2X	2X				
NUMBER OF SAMPLES			25	25	20	20	23	23

GRAND TOTAL SAMPLES 136

X = one sample collected and analyzed

2X = replicate samples collected and analyzed

LOW = 0.30-0.79 fps
MEDIUM = 1.48-1.82 fps
HIGH = $\geq$2.97 fps

b. Laboratory Procedures

All samples were preserved in a 5% buffered formalin solution and transported to the laboratory for analysis. All white perch, striped bass, and bay anchovy eggs and larvae were picked from each sample using a dissecting microscope at 40x magnification. Each larva was identified to species when possible and counted. White perch and striped bass larvae which could not be identified to species were recorded as UID Morone spp. and are reflected in the total Morone spp. abundances.

Larvae from each sample were randomly selected for length measurements and life stage classification. Length determinations were performed under a dissecting microscope using a calibrated ocular micrometer.

c. Analytical Methods

Concentrations (number of larvae per 1000 m^3) were calculated by dividing the number of larvae collected by the volume sampled (m^3) and multiplying by 1000. Volumes filtered were calculated using the following formula:

0.5-m net:

m^3 = (number of revolutions on TSK meter) x (0.02945 m^3/rev)

1.0-m net:

m^3 = (number of revolutions on TSK meter) x (0.1178 m^3/rev)

The data were handled in two stages: first, the abundance estimates generated by nets of two different diameters were investigated, and second, the abundance estimates from collections at different velocities were examined.

The basic criterion to be met in each comparison was that a sample pair must be collected simultaneously (or within certain time limits) at the same site and depth. Comparisons between net sizes were always balanced because of the deployment of the bongo sampling arrangement. Simultaneous collections were averaged by gear type and represented as a single value. The data for comparisons across velocity regimes were collected independently and did not necessarily coincide in time. Due to the variability in larval abundances exhibited as a result of tidal or diel factors (Figure IV-28), all comparisons between velocity regimes had to be balanced in time. Therefore, only a selected subset of the total samples could be used. Figure IV-28 suggests a lower larval abundance associated with a slack tide.

Since all low velocity sampling was done in conjunction with a slack tide, it would be expected that the mean concentrations for all low velocity collections would be lower than the mean of the other velocity regimes which were sampled throughout the day and night.

Therefore, in order to make a valid comparison of efficiencies among velocity regimes, it was important to eliminate long-term temporal differences from the analysis as sources of bias and variability. A criterion of one-hour intervals was established for all comparisons between velocity regimes. This was accomplished by dividing each day into 24 one-hour periods, each starting on the hour. Each period used in the comparison of two velocity groups contained at least one collection from each of the two velocities under consideration.

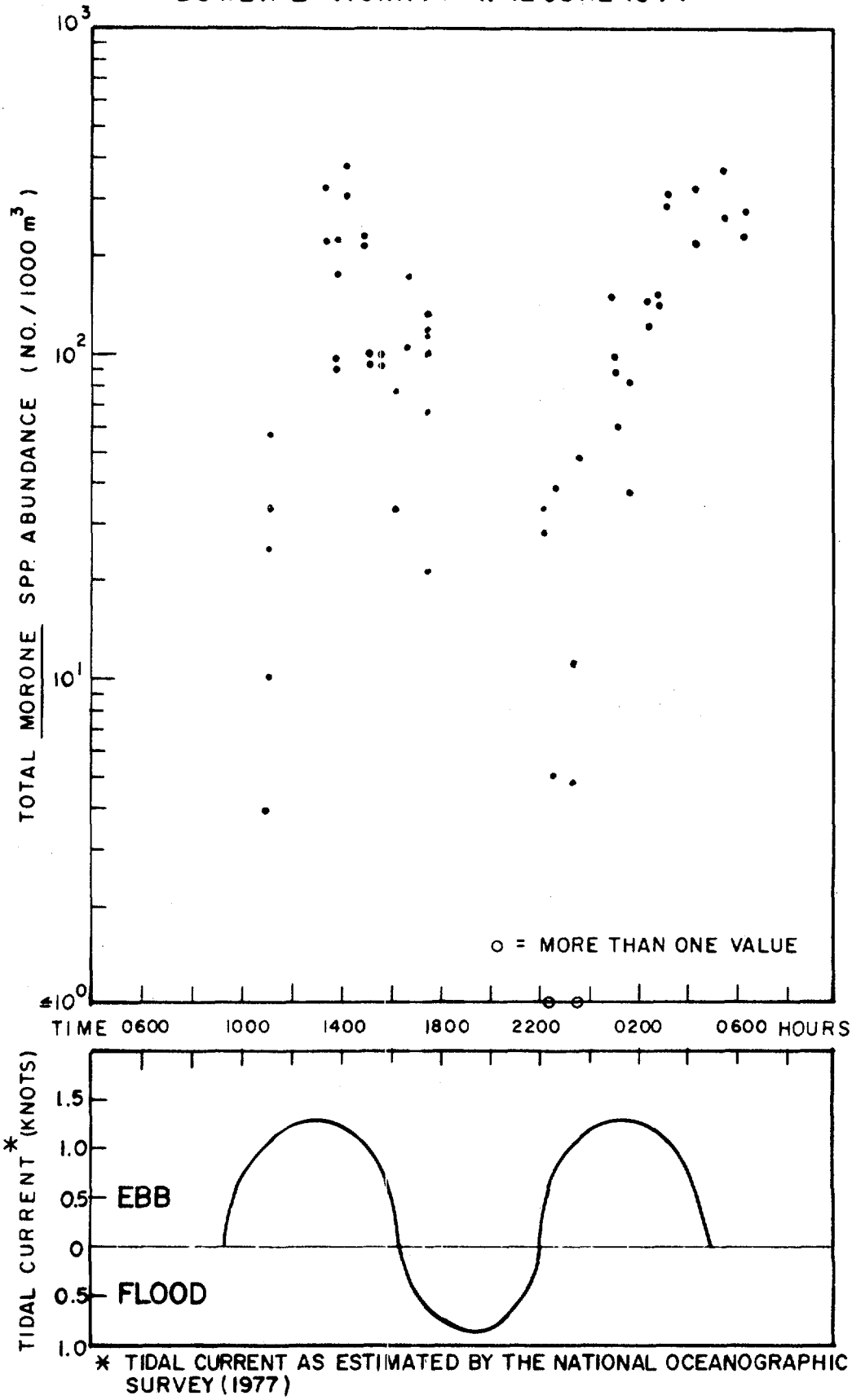
Standard statistical techniques were employed to evaluate the abundance data. A two-tailed paired-t test ($\alpha = 0.05$) was used to compare the mean abundances from the 1.0-m versus the 0.5-m collections, and a correlation analysis was performed in order to examine

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE OF MORONE SPP. FOR ALL COLLECTIONS VERSUS TIDAL CURRENT

BOWLINE VICINITY–11-12 JUNE 1977



* TIDAL CURRENT AS ESTIMATED BY THE NATIONAL OCEANOGRAPHIC SURVEY (1977)

the consistency of paired 1.0 and 0.5-m collections. The correlation reflects the degree of linear predictability of 1.0-m from 0.5-m samples.

Larval abundances relative to collection velocity were compared by using non-orthogonal analysis of variance techniques. Due to the large variations in larval abundances exhibited over time (Figure IV-28), the data were log-transformed ($\log_{10}$ [x + 1]) prior to statistical testing where required to stabilize the variance. This was not necessary for performing the paired-t test as the paired-t procedure does not assume homogeneity of variance.

Period was included as a factor in the analysis of variance in order to reduce the variability of velocity comparisons. The statistical significance of "periods" in most of the ANOVAs indicates that this was effective and that a one-way ANOVA or simple t test would have been much less able to detect velocity differences.

3. Results

The organisms collected in these studies were predominantly at the early post-yolk-sac life stage and approximately 5 to 8 mm in length. At this age, mobility would be minimal.

a. Comparison of Larval Abundances from One-Meter Versus Half-Meter Nets

Comparisons were made of paired 1.0-m and 0.5-m diameter net collections over three velocity ranges (representing low [0.30-0.79 fps], medium [1.48-1.82 fps], and high [>2.97 fps] sampling velocities). A total of 67 sample pairs were

collected (Table IV-25) from three velocity groups. Totals of 20 and 23 pairs were used for the medium, and high velocity groups, respectively. As noted above, low velocity sampling involved the simultaneous collection of two pairs of 1.0-m and 0.5-m diameter nets. Due to the spatial and temporal proximity of such collections, the two bongo pairs were not considered to be independent paired samples for this analysis. Hence, the two 1.0-m samples were pooled and considered to be a single collection, as were the two 0.5-m samples. This resulted in a total of 12 pairs for low velocity, although 24 pairs of low velocity samples were reported in Table IV-25.

The larval taxa which were considered were striped bass, white perch, total Morone spp., and bay anchovy.

Mean larval abundances in simultaneous 1.0-m and 0.5-m diameter net collections were compared for each of the three velocity groups using paired-t tests at the 5% significance level. No significant differences were found in the larval abundance between the two net sizes for any of the three individual velocity groups for any of the taxa of interest; however, there was a significant difference demonstrated between the 1.0 and 0.5 m net for total Morone spp. and striped bass when the comparison was made across all the velocities (Table IV-26). Correlation between paired 1.0-m and 0.5-m net collections was significant for total Morone, striped bass, and bay anchovy, indicating a linear relationship between 1.0-m and 0.5-m net samples. A forced-intercept regression analysis of the data provided the following predictive equations for total Morone spp. and striped bass:

Total Morone; 1.0 m concentration = 1.102 (0.5 m concentration)

Striped Bass; 1.0 m concentration = 1.172 (0.5 m concentration)

TABLE IV-25

ORANGE AND ROCKLAND UTILITIES, INC.
ICHTHYOPLANKTON GEAR COMPARISON STUDY

ABUNDANCE OF LARVAE FROM 0.5 AND 1.0 M NETS
DEPLOYED IN A BONGO ARRANGEMENT AT STATION BW

BOWLINE VICINITY - 1977

INVENTORY NO.	DATE	TIME	NET SIZE (m)	VELOCITY (fps)	SAMPLE VOL. (m^3)	CONC. (NO./1000 m^3) MORONE*	SB	WP	BA
14992	9 JUN	0705-0718	1.0	0.53	127	0	0	0	0
14993		" "	0.5	0.53	43	0	0	0	0
14990		0705-0720	1.0	0.53	201	65	35	30	0
14991		" "	0.5	0.53	53	0	0	0	0
15028		0705-0710	1.0	2.97	174	63	57	6	6
15029		" "	0.5	2.97	36	0	0	0	0
14994		0910-0925	1.0	0.43	61	148	148	0	0
14995		" "	0.5	0.43	14	71	71	0	0
15030		0910-0915	1.0	2.97	262	8	0	8	34
15031		" "	0.5	2.97	68	0	0	0	15
14996		0912-0927	1.0	0.43	59	85	85	0	0
14997		" "	0.5	0.43	18	222	222	0	0
14638	11 JUN	1108-1123	1.0	0.50	287	10	7	3	0
14639		" "	0.5	0.50	72	56	28	28	14
14640		1109-1124	1.0	0.50	271	33	18	11	4
14641		" "	0.5	0.50	79	25	25	0	0
15032		1110-1115	1.0	2.97	225	4	4	0	147
15033		" "	0.5	2.97	31	0	0	0	65
14644		1320-1325	1.0	2.97	225	320	222	71	44
14645		" "	0.5	2.97	59	220	186	0	136
14642		1350-1400	1.0	1.48	236	178	136	13	85
14643		" "	0.5	1.48	63	95	48	48	206
14662		1352-1402	1.0	1.48	251	227	195	8	16
14663		" "	0.5	1.48	65	92	62	31	15
14646		1419-1429	1.0	1.82	245	388	327	29	94
14647		" "	0.5	1.82	66	303	258	0	91
14648		1445-1450	1.0	2.97	209	220	196	24	172
14649		" "	0.5	2.97	57	228	193	0	175
14650		1505-1515	1.0	1.82	231	91	52	9	87
14651		" "	0.5	1.82	59	102	68	17	169
14652		1524-1535	1.0	1.82	231	91	56	13	48
14653		" "	0.5	1.82	58	103	52	17	121
14654		1609-1630	1.0	0.40	144	76	62	0	0
14655		" "	0.5	0.40	30	33	0	0	33
14666		1617-1622	1.0	2.97	197	173	102	41	41
14667		" "	0.5	2.97	48	104	42	21	42
14668		1735-1740	1.0	2.97	252	67	40	12	56
14669		" "	0.5	2.97	70	100	57	29	43
14658		1738-1753	1.0	0.46	173	116	69	23	6
14659		" "	0.5	0.46	45	133	67	22	0
14660		1739-1754	1.0	0.46	167	114	42	72	0
14661		" "	0.5	0.46	48	21	0	21	0
14670		2202-2217	1.0	0.59	212	28	14	0	0
14671		" "	0.5	0.59	63	0	0	0	0
14672		2205-2220	1.0	0.59	212	33	24	5	5
14673		" "	0.5	0.59	57	0	0	0	0
14694		2225-2230	1.0	2.97	197	5	0	0	5
14695		" "	0.5	2.97	53	38	38	0	0
14674		2320-2335	1.0	0.56	7	143	0	0	0
14675		" "	0.5	0.56	1	0	0	0	0
14676		2325-2340	1.0	0.56	8	0	0	0	0
14677		" "	0.5	0.56	2	0	0	0	0
14696		2335-2340	1.0	2.97	167	48	18	0	0
14697		" "	0.5	2.97	49	20	20	0	0

*Morone include Striped bass, White perch and all UID Morone that could not be identified to species

TABLE IV-25 (Continued)

ABUNDANCE OF LARVAE FROM 0.5 AND 1.0 M NETS
DEPLOYED IN A BONGO ARRANGEMENT AT STATION BW

INVENTORY NO.	DATE	TIME	NET SIZE (m)	VELOCITY (fps)	SAMPLE VOL. (m^3)	CONC. (NO./1000 m^3) MORONE*	SB	WP	BA
14678	12 JUN	0050-0100	1.0	1.65	223	99	63	0	22
14679		" "	0.5	1.65	65	154	123	0	0
14698		0050-0100	1.0	1.48	205	88	54	0	29
14699		" "	0.5	1.48	51	59	59	0	0
14680		0140-0145	1.0	2.97	209	81	67	0	0
14681		" "	0.5	2.97	54	37	19	0	0
14682		0210-0220	1.0	1.65	218	124	110	0	18
14683		" "	0.5	1.65	54	148	111	37	0
14684		0245-0250	1.0	2.97	188	154	138	0	5
14685		" "	0.5	2.97	50	140	100	0	80
14686		0320-0330	1.0	1.65	251	307	243	12	0
14687		" "	0.5	1.65	66	288	212	0	15
14688		0410-0420	1.0	1.65	224	326	281	22	9
14689		" "	0.5	1.65	60	217	167	17	17
14712		0530-0535	1.0	2.97	127	370	354	0	8
14713		" "	0.5	2.97	38	263	211	0	26
14714		0615-0620	1.0	2.97	177	277	266	6	23
14715		" "	0.5	2.97	52	231	173	0	19
14598	14 JUN	1140-1145	1.0	2.97	152	53	33	20	7
14599		" "	0.5	2.97	45	89	44	22	0
14578		1140-1155	1.0	0.30	21	0	0	0	0
14579		" "	0.5	0.30	7	0	0	0	0
14580		1140-1155	1.0	0.30	2	0	0	0	0
14581		" "	0.5	0.30	4	0	0	0	0
14582		1340-1355	1.0	0.79	119	42	42	0	17
14583		" "	0.5	0.79	27	0	0	0	0
14584		1340-1355	1.0	0.79	170	6	6	0	0
14585		" "	0.5	0.79	41	24	24	0	73
14600		1345-1350	1.0	2.97	127	8	8	0	16
14601		" "	0.5	2.97	47	21	21	0	0
14586		1439-1449	1.0	1.82	233	52	34	0	52
14587		" "	0.5	1.82	59	153	68	0	0
14602		1505-1515	1.0	1.48	177	164	45	119	6
14603		" "	0.5	1.48	47	43	0	43	21
14588		1530-1535	1.0	2.97	203	79	39	0	25
14589		" "	0.5	2.97	53	19	0	0	94
14590		1544-1554	1.0	1.82	283	212	131	18	67
14591		" "	0.5	1.82	72	208	181	14	14
14592		1605-1610	1.0	2.97	190	405	311	26	53
14593		" "	0.5	2.97	49	327	184	41	41
14594		1622-1632	1.0	1.82	282	131	78	11	74
14595		" "	0.5	1.82	74	81	81	0	432
14596		1645-1655	1.0	1.82	273	77	59	15	297
14597		" "	0.5	1.82	71	56	28	28	239
14550		1853-1908	1.0	0.40	24	208	125	42	0
14551		" "	0.5	0.40	8	0	0	0	0
14552		1855-1910	1.0	0.40	26	77	38	38	0
14553		" "	0.5	0.40	5	200	0	200	0
14616		1900-1905	1.0	2.97	217	143	74	51	207
14617		" "	0.5	2.97	59	85	68	0	68
14554		1920-1935	1.0	0.69	81	198	123	37	0
14555		" "	0.5	0.69	25	120	120	0	0
14556		1925-1940	1.0	0.69	123	154	130	0	0
14557		" "	0.5	0.69	34	29	29	0	0

*Morone include Striped bass, White perch and all UID Morone that could not be identified to species

TABLE IV-25 (Continued)

ABUNDANCE OF LARVAE FROM 0.5 AND 1.0 M NETS
DEPLOYED IN A BONGO ARRANGEMENT AT STATION BW

INVENTORY NO.	DATE	TIME	NET SIZE (m)	VELOCITY (fps)	SAMPLE VOL. (m^3)	CONC. (NO./1000 m^3) MORONE*	SB	WP	BA
14618	14 JUN	1930-1935	1.0	2.97	207	155	63	58	48
14619		" "	0.5	2.97	57	123	123	0	18
14620		2010-2015	1.0	2.97	203	148	103	25	143
14621		" "	0.5	2.97	52	231	77	77	38
14558		2010-2020	1.0	1.65	279	226	186	25	72
14559		" "	0.5	1.65	78	244	205	0	38
14560		2025-2030	1.0	2.97	246	126	102	4	122
14561		" "	0.5	2.97	68	147	118	15	147
14622		2025-2035	1.0	1.48	239	176	92	13	218
14623		" "	0.5	1.48	67	254	119	60	313
14562		2100-2110	1.0	1.65	266	4	0	0	0
14563		" "	0.5	1.65	73	0	0	0	14
14564		2120-2125	1.0	2.97	240	25	25	0	0
14565		" "	0.5	2.97	65	77	31	15	31
14566		2140-2150	1.0	1.65	286	28	7	0	0
14567		" "	0.5	1.65	78	26	26	0	13
14568		2205-2215	1.0	1.65	239	33	21	0	0
14569		" "	0.5	1.65	65	108	77	0	0
14632		2350-2355	1.0	2.97	229	9	0	4	26
14633		" "	0.5	2.97	60	0	0	0	50
14570		2350-0005	1.0	0.66	66	0	0	0	0
14571		" "	0.5	0.66	16	0	0	0	0
14572		2351-0006	1.0	0.66	70	71	29	14	29
14573		" "	0.5	0.66	22	45	0	0	0
14574	15 JUN	0025-0040	1.0	0.30	6	0	0	0	0
14575		" "	0.5	0.30	1	0	0	0	0

*Morone include Striped bass, White perch and all UID Morone that could not be identified to species

TABLE IV-26

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

STATISTICAL ANALYSIS OF MEAN ABUNDANCES[a] OF ICHTHYOPLANKTON
COLLECTED IN 0.5 AND 1.0 M NETS DEPLOYED IN A BONGO ARRANGEMENT

BOWLINE VICINITY - 1977

TAXON	VELOCITY	n	0.5 m MEAN	0.5 m S.D.	1.0 m MEAN	1.0 m S.D.	AVG. DIFF.[b]	% DIFF.[c]	CORR.	t	D.F.
Total *Morone* spp.	Low	12	40.83	46.80	69.83	54.52	29.00	41.5	0.705*	2.541*	11
	Med	20	136.70	88.95	151.10	104.81	14.40	9.5	0.774*	0.962	19
	High	23	108.70	98.56	127.87	119.76	19.17	15.0	0.914*	1.801	22
	Total	55	104.07	92.08	123.66	106.04	19.59	15.8	0.860*	2.680*	54
Striped Bass	Low	12	24.75	46.25	44.25	44.04	19.50	44.1	0.723*	2.005	11
	Med	20	97.25	73.33	108.50	92.99	11.25	10.4	0.809*	0.921	19
	High	23	74.13	71.96	96.61	104.17	22.48	23.3	0.906*	2.134	22
	Total	55	71.76	71.91	89.51	92.02	17.75	19.8	0.857*	2.743*	54
White Perch	Low	12	9.33	22.44	11.33	16.29	2.00	17.7	0.730*	0.452	11
	Med	20	15.60	19.28	15.35	26.02	-0.25	-1.6	0.357	0.045	19
	High	23	9.57	18.73	15.48	21.07	5.91	38.2	0.149	1.065	22
	Total	55	11.71	19.62	14.53	21.82	2.82	19.4	0.335*	0.872	54
Bay Anchovy	Low	12	7.00	15.03	2.42	4.48	-4.58	-189.3	0.161	1.060	11
	Med	20	85.90	123.81	59.70	76.18	-26.20	-43.9	0.666*	1.266	19
	High	23	47.30	50.06	51.65	61.54	4.35	8.4	0.579*	0.389	22
	Total	55	53.49	85.40	43.84	63.95	-9.65	-22.0	0.640*	1.080	54

[a] # larvae/1000 m^3
[b] Difference in number of organisms (1.0-0.5 m)
[c] As a percent of 1.0 m collections
S.D. - Standard deviation
Corr. - Correlation between 0.5 m and 1.0 m abundances
t - Paired t tests, two sided

*Significant at = 0.05

The results are summarized below.

FORCED-INTERCEPT REGRESSION ANALYSIS OF MEAN ABUNDANCES OF ICHTHYOPLANKTON COLLECTED IN 0.5 AND 1.0 m NETS DEPLOYED AT ALL VELOCITIES IN A BONGO ARRANGEMENT

	Degrees of Freedom	Slope	Mean Square Error	95% Confidence Interval
Total *Morone* spp.	54	1.102	3123.13	± 0.109
Striped Bass	54	1.172	2313.84	± 0.129

b. Comparison of Larval Abundances Relative to Collection Velocity

As in the first comparison, samples were classified according to collection velocity: low (0.30-0.79 fps), medium (1.48-1.82 fps), and high (>2.97 fps). As previously discussed, in order to protect against biases in making comparisons due to potentially large differences in abundance associated with diel or tidal factors (Figure IV-28), it was necessary to extract a subset of the available data that was balanced in time. This was accomplished by dividing each day into 24 one-hour periods, each starting on the hour, and using those periods containing at least one collection from each of the two velocities under consideration for the comparison (Table IV-24).

Eleven such periods were used for the low vs. high velocity comparison (Table IV-27) and seven for the medium vs. high velocity comparison (Table IV-28); however, insufficient data were available (only one period) to permit comparing low against medium velocity.

Comparisons were made using analysis of variance techniques at the 5% significance level for each taxon (total *Morone* spp., striped bass, white perch, and bay anchovy) separately by net size.

TABLE IV-87

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LARVAL ABUNDANCE* IN COLLECTIONS AT LOW VS. HIGH VELOCITY WITH 0.5 AND 1.0 M NETS

BOWLINE POINT GENERATING STATION - 1977

TAXON	NET SIZE (m)	VELOCITY	9 JUN 0700	0900	1100	1600	11 JUN 1700	2200	2300	1100	14 JUN 1300	1900	2300	ADJUSTED MEAN
Striped bass	0.5	Low	0	71	28	0	67	0	0	0	0	120	0	
			0	222	25		0	0	0	0	24	29	0	
		Mean	0	146	26	0	34	0	0	0	12	74	0	26.5
		High	0	0	0	42	57	38	20	44	21	68	0	
												123		
		Mean	0	0	0	42	57	38	20	44	21	96	0	28.9
	1.0	Low	35	148	7	62	69	14	0	0	42	123	0	
			0	85	18		42	24	0	0	6	130	29	
		Mean	18	116	12	62	56	19	0	0	24	126	14	40.6
		High	57	0	4	102	40	0	18	33	8	74	0	
												63		
		Mean	57	0	4	102	40	0	18	33	8	68	0	30.0
White perch	0.5	Low	0	0	28	0	22	0	0	0	0	0	0	
			0	0	0		21	0	0	0	0	0	0	
		Mean	0	0	14	0	22	0	0	0	0	0	0	3.3
		High	0	0	0	21	29	0	0	22	0	0	0	
												0		
		Mean	0	0	0	21	29	0	0	22	0	0	0	6.5
	1.0	Low	30	0	3	0	23	0	0	0	0	37	0	
			0	0	11		72	5	5	0	0	0	14	
		Mean	15	0	7	0	48	2	2	0	0	18	7	9.0
		High	6	8	0	41	12	0	0	20	0	51	4	
												58		
		Mean	6	8	0	41	12	0	0	20	0	54	4	13.2
Morone spp.	0.5	Low	0	71	56	33	133	0	0	0	0	120	0	
			0	222	25		21	0	0	0	24	29	45	
		Mean	0	146	40	33	77	0	0	0	12	74	22	36.7
		High	0	0	0	104	100	38	20	89	21	85	0	
												123		
		Mean	0	0	0	104	100	38	20	89	21	104	0	43.3
	1.0	Low	65	148	10	76	116	28	143	0	42	198	0	
			0	85	33		114	33	0	0	6	154	71	
		Mean	32	116	22	76	115	30	72	0	24	176	36	63.5
		High	63	8	4	173	67	5	48	53	8	143	9	
												155		
		Mean	63	8	4	173	67	5	48	53	8	149	9	53.4
Bay anchovy	0.5	Low	0	0	14	33	0	0	0	0	0	0	0	
			0	0	0		0	0	0	0	73	0	0	
		Mean	0	0	7	33	0	0	0	0	36	0	0	6.9
		High	0	15	65	42	43	0	0	0	0	68	50	
												18		
		Mean	0	15	65	42	43	0	0	0	0	43	50	23.5
	1.0	Low	0	0	0	0	6	0	0	0	17	0	0	
			0	0	4		0	5	0	0	0	0	29	
		Mean	0	0	2	0	3	2	0	0	8	0	14	2.6
		High	6	34	147	41	56	5	0	7	16	207	26	
												48		
		Mean	6	34	147	41	56	5	0	7	16	128	26	42.4

*Number of larvae per 1000 m^3

TABLE IV- 28

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LARVAL ABUNDANCE* IN COLLECTIONS AT MEDIUM VS. HIGH VELOCITY WITH 0.5 AND 1.0 M NETS

BOWLINE POINT GENERATING STATION - 1977

TAXON	NET SIZE (m)	VELOCITY	11-12 JUN 1300	1400	0200	14 JUN 1500	1600	2000	2100	ADJUSTED MEAN
Striped bass	0.5	Medium	48	258	111	0	81	205	0	
			62			181	28	119	26	
		Mean	55	258	111	90	54	162	13	106.1
		High	186	193	100	0	184	77	31	
								118		
		Mean	186	193	100	0	184	98	31	113.1
	1.0	Medium	136	327	110	45	78	186	0	
			195			131	59	92	7	
		Mean	166	327	110	88	68	139	4	128.9
		High	222	196	138	39	311	103	25	
								102		
		Mean	222	196	138	39	311	102	25	147.6
White perch	0.5	Medium	48	0	37	43	0	0	0	
			31			14	28	60	0	
		Mean	40	0	37	28	14	30	0	21.3
		High	0	0	0	0	41	77	15	
								15		
		Mean	0	0	0	0	41	46	15	14.6
	1.0	Medium	13	29	0	119	11	25	0	
			8			18	15	13	0	
		Mean	10	29	0	68	13	19	0	19.9
		High	71	24	0	0	26	25	0	
								4		
		Mean	71	24	0	0	26	14	0	19.3
Morone spp.	0.5	Medium	95	303	148	43	81	244	0	
			92			208	56	254	26	
		Mean	94	303	148	126	68	249	13	143.0
		High	220	228	140	19	327	231	77	
								147		
		Mean	220	228	140	19	327	189	77	171.4
	1.0	Medium	178	388	124	164	131	226	4	
			227			212	77	176	28	
		Mean	202	388	124	188	104	201	16	174.7
		High	320	220	154	79	405	148	25	
								126		
		Mean	320	220	154	79	405	137	25	191.4
Bay anchovy	0.5	Medium	206	91	0	21	432	38	14	
			15			14	239	313	13	
		Mean	110	91	0	18	336	176	14	106.4
		High	136	175	80	94	41	38	31	
								147		
		Mean	136	175	80	94	41	92	31	92.7
	1.0	Medium	85	94	18	6	74	72	0	
			16			67	297	218	0	
		Mean	50	94	18	36	186	145	0	75.6
		High	44	172	5	25	53	143	0	
								122		
		Mean	44	172	5	25	53	132	0	61.6

*Number of larvae per 1000 m^3; 571 mesh net

Comparisons of mean abundances for a given collection gear (1.0-m Hensen or 0.5-m conical net) over velocity showed a significant difference ($\alpha = 0.05$) between the mean abundances for high and low velocity collections for bay anchovy for both collection gears (Table IV-29). There was no significant differences ($\alpha = 0.05$) found in the mean concentrations of any of the other taxa (total Morone spp., striped bass, or white perch) within a specific collection gear for low vs. high (Table IV-29) or medium vs. high (Table IV-30) sampling velocities. As previously demonstrated (Figure IV-28), significant differences were commonly found between periods for both net sizes.

Therefore, with the exception of bay anchovy abundances, sampling velocity does not appear to affect the mean abundance as measured with either the 0.5 or 1.0 m net.

Analysis of variance was also run on the relationship between mean abundances from the 0.5-m low velocity collections and those from the 1.0-m high velocity collections (Table IV-31). Significant differences ($\alpha = 0.05$) were found in abundance for all taxa (total Morone spp., white perch, and bay anchovy).

TABLE IV-29

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

STATISTICAL ANALYSIS OF MEAN ABUNDANCES OF ICHTHYOPLANKTON FOR 0.5 AND 1.0 M NETS AT HIGH VS. LOW SAMPLING VELOCITIES

BOWLINE VICINITY - 1977

		ANALYSIS OF VARIANCE[a]							
		0.5 M NETS				1.0 M NETS			
TAXON	SOURCE	DF	SS	MS	F	DF	SS	MS	F
Striped bass	Velocities	1	1.1391	1.1391	4.19	1	0.0786	0.0786	0.31
	Periods	10	9.0000	0.9000	3.31*	10	8.2429	0.8243	3.28*
	Interaction	10	10.1686	1.0169	3.74*	10	7.7372	0.7737	3.08*
	Error	11	2.9936	0.2721		11	2.7615	0.2510	
White perch	Velocities	1	0.2667	0.2667	2.74	1	0.5228	0.5228	1.48
	Periods	10	5.7468	0.5747	5.91*	10	5.4572	0.5457	1.54
	Interaction	10	2.3200	0.2320	2.39	10	4.3227	0.4323	1.22
	Error	11	1.0695	0.0972		11	3.8891	0.3536	
Morone spp.	Velocities	1	0.2387	0.2387	0.86	1	0.0275	0.0275	0.05
	Periods	10	10.4968	1.0497	3.80*	10	6.4480	0.6448	1.15
	Interaction	10	10.7506	1.0751	3.89*	10	4.3089	0.4309	0.77
	Error	11	3.0420	0.2765		11	6.1777	0.5616	
Bay anchovy	Velocities	1	2.5707	2.5707	10.90*	1	8.3794	8.3794	30.93*
	Periods	10	7.1743	0.7174	3.04*	10	3.7282	0.3728	1.38
	Interaction	10	5.6104	0.5610	2.38	10	2.9565	0.2957	1.09
	Error	11	2.5955	0.2360		11	2.9800	0.2709	

[a]Non-orthogonal analysis; log transformed data
*Significant at = 0.05

TABLE IV-30

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

STATISTICAL ANALYSIS OF MEAN ABUNDANCES OF ICHTHYOPLANKTON
FOR 0.5 AND 1.0 M NETS AT HIGH VS. MEDIUM SAMPLING VELOCITIES

BOWLINE VICINITY - 1977

		ANALYSIS OF VARIANCE[a]							
		0.5 M NETS				1.0 M NETS			
TAXON	SOURCE	DF	SS	MS	F	DF	SS	MS	F
Striped bass	Velocities	1	0.0133	0.0133	0.02	1	0.1386	0.1386	1.44
	Periods	6	6.4778	1.0796	1.74	6	3.7944	0.6324	6.57*
	Interaction	6	1.7200	0.2867	0.46	6	0.8739	0.1457	1.51
	Error	6	3.7306	0.6218		6	0.5778	0.0963	
White perch	Velocities	1	0.3063	0.3063	0.61	1	0.0712	0.0712	0.67
	Periods	6	2.4909	0.4151	0.82	6	5.8680	0.9780	9.18*
	Interaction	6	6.0833	1.0139	2.01	6	2.3318	0.3886	3.65
	Error	6	3.0260	0.5043		6	0.6390	0.1065	
Morone spp.	Velocities	1	0.1463	0.1463	0.68	1	0.0186	0.0186	0.33
	Periods	6	2.6176	0.4363	2.04	6	2.6253	0.4376	7.78*
	Interaction	6	1.5098	0.2516	1.18	6	0.4798	0.0799	1.42
	Error	6	1.2851	0.2142		6	0.3374	0.0562	
Bay anchovy	Velocities	1	0.6056	0.6056	2.92	1	0.0240	0.0240	0.14
	Periods	6	2.5780	0.4297	2.07	6	9.3125	1.5520	19.03*
	Interaction	6	2.5646	0.4274	2.06	6	0.2786	0.0464	0.27
	Error	6	1.2433	0.2072		6	1.0310	0.1718	

[a]Non-orthogonal analysis; log transformed data
*Significant at 5% level

TABLE IV-31

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

STATISTICAL ANALYSIS OF MEAN ABUNDANCES OF ICHTHYOPLANKTON COLLECTED IN 0.5 M NETS AT LOW VELOCITY AND 1.0 M NETS AT HIGH VELOCITY

BOWLINE VICINITY - 1977

	ANALYSIS OF VARIANCE[a]				
TAXON	SOURCE	DF	SS	MS	F
Striped bass	Net Size and Velocity	1	1.3711	1.3711	5.09*
	Periods	10	8.3873	0.8387	3.11*
	Interaction	10	9.3485	0.9349	3.47*
	Error	11	2.9636	0.2694	
White perch	Net Size and Velocity	1	2.3432	2.3432	24.07*
	Periods	10	4.3654	0.4365	4.48*
	Interaction	10	4.6784	0.4678	4.81*
	Error	11	1.0710	0.0974	
Morone spp.	Net Size and Velocity	1	1.8995	1.8995	6.90*
	Periods	10	7.7740	0.7774	2.82
	Interaction	10	6.4930	0.6493	2.36
	Error	11	3.0300	0.2755	
Bay anchovy	Net Size and Velocity	1	7.6454	7.6454	31.91*
	Periods	10	5.3653	0.5365	2.24
	Interaction	10	3.3466	0.3347	1.40
	Error	11	2.6357	0.2396	

[a]Non-orthogonal analysis, log transformed data
*Significant at = 0.05

V. RIVER FISH

A. INTRODUCTION

The 1977 fish studies conducted in the Hudson River in the vicinity of the Bowline Point Generating Station were a continuation of work initiated in 1971. These studies were designed to characterize the community structure of Hudson River fishes by investigating the abundance and distribution of these communities over time and between stations. Previous studies have been summarized in O&R (1977) and only data necessary for comparative purposes are duplicated here.

B. MATERIALS AND METHODS

Procedures and equipment utilized in studies prior to 1977 were described completely in O&R (1977); this section documents the procedures used throughout 1977.

Surveys were conducted in the Bowline area every two weeks from mid-February through mid-December 1977 (Table V-1). All sample collections were conducted from one hour after sunrise to one hour before sunset, except for some seine collections which, due to the time of occurrence of low water, required sampling outside this time frame (Table V-1).

1. Station Locations

a. Trawls (Figure V-1)

Bowline Pond (BP): a surface trawl around the perimeter of the pond from the northeast corner, past the intake, and out to the inlet to a point just past the brick island.

TABLE V-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

RIVER FISH SAMPLING PROGRAM

BOWLINE VICINITY - 1977

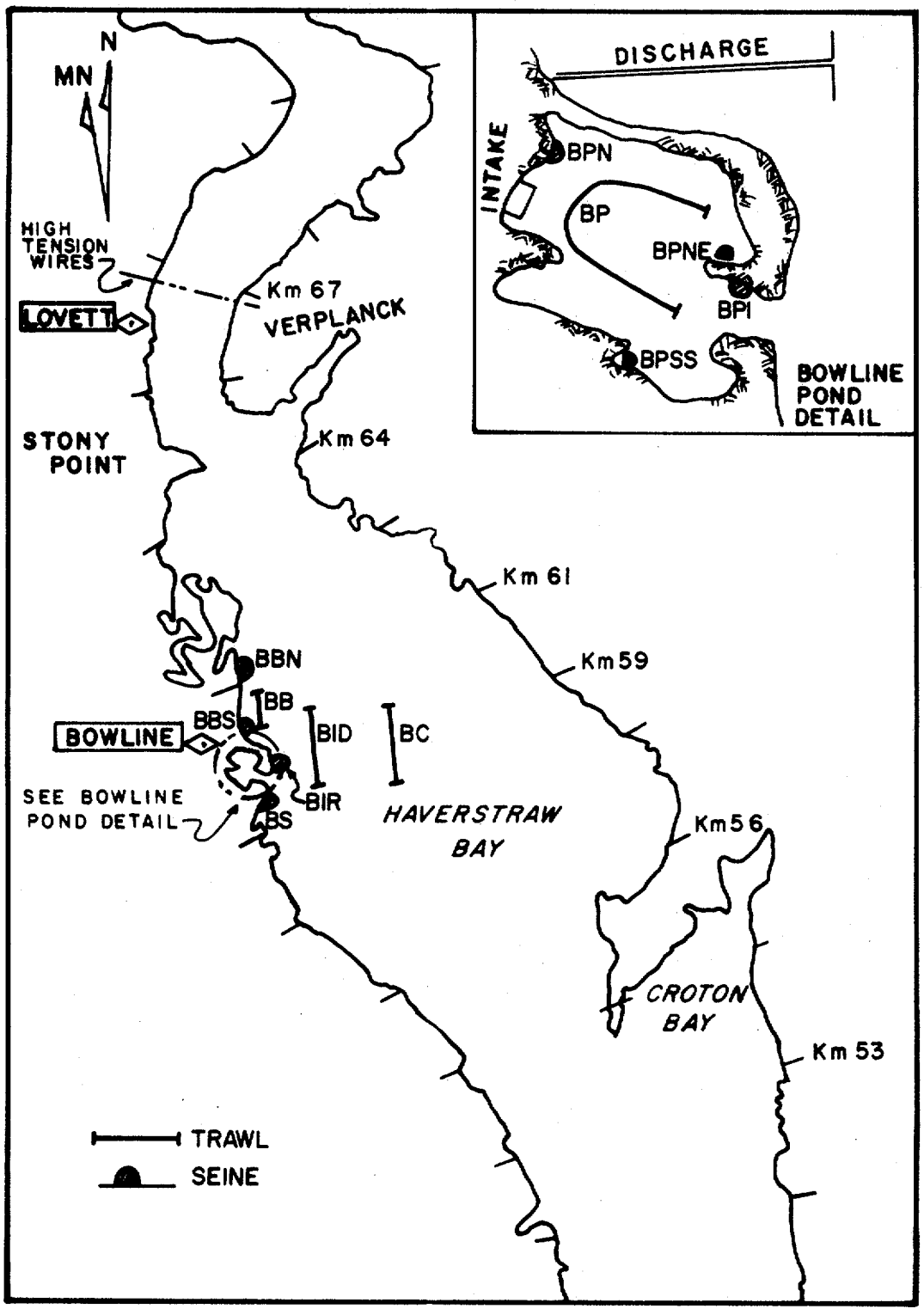
			SAMPLING DATES																				
GEAR	STATION	SAMPLE DEPTH	25 FEB	9 MAR	23 MAR	6 APR	20 APR	4 MAY	18 MAY	1 JUN	15 JUN	29 JUN	13 JUL	27 JUL	10 AUG	24 AUG	7 SEP	21 SEP	5 OCT	19 OCT	2 NOV	16 NOV	30 NOV	14-16 DEC
TRAWLS																							
	BP	S	NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	BID	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	BID	B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	BC	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	BC	B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	BB	B	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SEINES																							
	BPI		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*	X*	X*
	BPSS		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*	X*	X*
	BPN		NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*	X*	X*	X
	BPNE		NS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*	X*	X*	X
	BS		X	X	X	X	X	X	X	X	X*	X	X	X	X	X	X	X	X	X	X	X	X	X
	BIR		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*
	BBS		X	X	X	X*	X*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*
	BBN		X	X	X	X*	X*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X*

* = Sample collected at night due to tidal restrictions
S = Surface
B = Bottom
NS = No sample

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

TRAWL AND SEINE SAMPLING LOCATIONS

BOWLINE VICINITY-1977



Bowline Bay (BB): a bottom trawl beginning in 2-3 m (6-11 ft) of water just north of the discharge plume, moving directly north from the southern stack toward the U.S. Gypsum dock, and ending at the old docks just north of the meteorological tower.

Bowline Inlet Discharge (BID): surface and bottom trawls covering the area from the old brick chimney located north of the plant to a point almost opposite the Bowline Pond inlet. The tow extends south in 6-8 m (20-25 ft) of water, running about 76 m (250 ft) out from the oil dock.

Bowline Control (BC): surface and bottom trawls on the east side of the river in 6-8 m (22-27 ft) of water covering the area from the old brick chimney north of the plant to a point due east of the pond entrance.

b. Seines (Figure V-1)

Bowline Pond Inlet (BPI): located on the north shore of the inlet on the sandy part of the beach.

Bowline Pond (BPSS): located on the south shore of the pond.

Bowline Pond North (BPN): located on the point approximately 120 m (400 ft) north of the intake structure.

Bowline Pond Northeast (BPNE): located on the east side of the pond just north of the inlet.

Bowline Bay North (BBN): located on the south end of a gravel beach just south of the submerged dock and north of the abandoned slips.

Bowline Bay South (BBS): located on the northeast side of a small sand bar off Minisceongo Creek, just west of the submerged debris.

Bowline Inlet-River (BIR): located midway between the oil dock and the pond inlet, adjacent to some partially submerged pilings, which require sampling during low tide.

Bowline South (BS): located on a sandy beach adjacent to the burned dock, in front of the park and approximately 370 m (400 yds) south of the pond inlet.

2. Field Collection Procedures

Sampling gear (trawls and seines) and deployment procedures of 1977 were the same in 1977 as those used throughout 1974-1976. These were completely documented in O&R (1977), but are briefly described here.

a. Trawls

Trawls were conducted with a 9.1-m (30 ft) otter trawl rigged with weighted doors. Tows were timed from the instant the trawl lines became taut; at this time the boat speed was increased to 150 cm/second (5 fps), determined with a G.O. velocity meter. Because trawls were conducted to sample a certain area, engine RPM and boat velocity through the water were recorded in addition to time. All trawls were towed against the prevailing tide except BB, which was towed from south to north to avoid inherent obstructions.

b. Seines

Seining was conducted from small boats with a 30.5 x 2.4 m (100 x 8 ft) bag seine of 0.64 cm (0.25 inch) mesh netting. If sampling problems occurred and the seine had to be repeated, a period of at least 30 minutes was permitted to elapse so that the area could return to an undisturbed condition before a second seine attempt was made.

All samples were bagged and preserved in 10% buffered formalin for transport to the laboratory. Atlantic and shortnose sturgeon were identified, lengthened and released in the field.

3. Laboratory Analysis Procedures

Laboratory analysis was performed in two steps: 1) preliminary analysis, where each sample was analyzed separately, and 2) secondary analysis, where the samples were combined and more in-depth analyses were performed on a specified number of individuals. Preliminary analyses were performed on all samples and secondary analysis was performed to fill monthly quotas for length.

a. Preliminary Analysis

This analytical procedure was performed for each individual sample collected from a survey. After being washed, all Atlantic tomcod, white perch, and striped bass in each sample were inspected for T.I. tags (commercial tags and fin clips), while all the fish were sorted, counted and weighed by species.

b. Secondary Analysis

This procedure was performed for the major species on a monthly quota basis. Up to 100 specimens each of white perch, striped

bass, Atlantic tomcod, alewife, blueback herring and bay anchovy were measured for length from each of the three bottom trawl collections (BC, BB and BID), a combined composite of pond seine collections (BPI, BPSS, BPN and BPNE), and a combined composite of river seine collections (BS, BIR, BBS and BBN).

Scale analysis was performed on a maximum of 30 male and 30 female white perch and striped bass per size interval per year. Length, weight and sex were determined for each fish from which scales were obtained.

(i) Length-Weight Measurements

Wet weight was determined to the nearest tenth of a gram on a calibrated Mettler balance, and total length to the nearest millimeter was measured. Total length was defined as the distance from the tip of the snout (jaws closed) to the tip of the tail with the lobes compressed to give the maximum possible measurement (Hile 1948). Blue crabs were measured on their dorsal surface across the carapace from point to point.

(ii) Sex Determination

Sex was determined through gonad analysis, since many species exhibit no external signs of sexual dimorphism. Testes were generally whitish in color with few blood vessels evident, while ovaries were usually pinkish to yellowish with more obvious blood vessels and a granular appearance due to oocytes and eggs. Sex was determined for blue crabs by examining the specimen's abdomen, which is narrow and pointed in males and broad in females.

(iii) Scale Analysis

For two species, striped bass and white perch, scale samples were taken from as many age groups as were found in the sample. Sex was determined for all fish from which scales were taken, a necessary process because males and females of the same species often demonstrate significantly different growth rates, and treatment of pooled sexes may have masked this phenomenon.

For each species, scales were removed from the same small area of the body, cleaned in soapy water, and placed in labeled envelopes and dried before being pressed onto cellulose acetate. Scales were "read" for annulus marks by at least two different investigators using a Bausch and Lomb Tri-Simplex projector. Scales of doubtful interpretation were not analyzed.

Annuli or year marks are characterized by "crossing-over" or "cutting over" of the circuli, discontinuous circuli, and crowding of the circuli prior to resumption of growth. Although annulus formation was not usually complete in January, all fish analyzed after 1 January were placed in the next year group, even if the area of renewed growth was not evident on the margin of the scale. Young-of-the-year fish, for instance, were in age group 0 until 1 January when they were moved into age group I.

(iv) Back Calculation of Growth Using Scales

Scales that had been selected as reliable age indicators were also used to calculate the amount of growth of the fish in each previous year of its life. This was done by measuring the distance between the focus of the scale, each succeeding annulus, and the total length of the scale.

C. RESULTS AND DISCUSSION

1. Annual Trend (1977)

a. Species Composition

A total of 45,111 fish of 43 species were identified from the 1977 fish sampling program conducted in the Bowline Point vicinity of the Hudson River (Tables V-2 and V-3). Atlantic tomcod, banded killifish, hogchoker, white catfish, striped bass, tessellated darter, and white perch were collected during each month sampled, whereas common shiner, crevalle jack, striped mullet, summer flounder, and white bass were represented in collections only during one month. More species were collected during the warmer months, while the least number of species were found during February and December.

b. Abundance and Biomass

(i) Bottom Trawls

Hogchoker and white perch were the most abundant species caught in bottom trawls in the Bowline Point vicinity, representing 39 and 22%, respectively, of the total year's catch. Atlantic tomcod was third in abundance, representing 18% of the total catch. Striped bass composed less than 6% of the total bottom trawl collections in the study area (Table V-4).

A total of nine Atlantic sturgeon and 2 shortnose sturgeon were captured in the Bowline river collections. The following lengths (cm) were recorded for the individual specimens prior to their release:

TABLE V-2

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY ALL GEARS

	JAN		FEB		MAR		APR		MAY		JUN	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		0	.0	1	.1	4	.4	19	1.0	11	.2
AMERICAN EEL	NOT SAMPLED		0	.0	4	.6	13	1.4	22	1.2	35	.6
AMERICAN SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	8	.1
ATLANTIC MENHADEN	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	2	.0
ATLANTIC NEEDLEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC STURGEON	NOT SAMPLED		0	.0	1	.1	4	.4	1	.1	2	.0
ATLANTIC TOMCOD	NOT SAMPLED		101	26.6	35	4.9	47	5.0	373	19.5	2358	40.7
BANDED KILLIFISH	NOT SAMPLED		4	1.1	26	3.6	39	4.1	24	1.3	47	.8
BAY ANCHOVY	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	280	4.8
BLUEBACK HERRING	NOT SAMPLED		0	.0	0	.0	0	.0	37	1.9	87	1.5
BLUEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	115	2.0
BLUEGILL	NOT SAMPLED		0	.0	1	.1	0	.0	3	.2	1	.0
BROWN BULLHEAD	NOT SAMPLED		0	.0	2	.3	6	.6	2	.1	4	.1
CARP	NOT SAMPLED		0	.0	1	.1	3	.3	1	.1	9	.2
COMMON SHINER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
CREVALLE JACK	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
FOURSPINE STICKLEBACK	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0	0	.0
GIZZARD SHAD	NOT SAMPLED		0	.0	3	.4	0	.0	0	.0	0	.0
GOLDEN SHINER	NOT SAMPLED		0	.0	14	2.0	3	.3	15	.8	76	1.3
GOLDFISH	NOT SAMPLED		0	.0	6	.8	1	.1	1	.1	6	.1
HOGCHOKER	NOT SAMPLED		1	.3	19	2.6	343	36.4	615	32.2	258	4.5
LARGEMOUTH BASS	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0	3	.1
LEPOMIS SP	NOT SAMPLED		0	.0	1	.1	0	.0	0	.0	0	.0
MUMMICHOG	NOT SAMPLED		0	.0	2	.3	0	.0	0	.0	1	.0
NORTHERN PIPEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
PUMPKINSEED	NOT SAMPLED		0	.0	129	18.0	25	2.7	79	4.1	212	3.7
RAINBOW SMELT	NOT SAMPLED		10	2.6	12	1.7	48	5.1	9	.5	19	.3
REDBREAST SUNFISH	NOT SAMPLED		0	.0	37	5.2	16	1.7	89	4.7	161	2.8
ROUGH SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	45	.8
SHORTNOSE STURGEON	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0	0	.0
SPOT	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
SPOTTAIL SHINER	NOT SAMPLED		0	.0	40	5.6	23	2.4	93	4.9	231	4.0
STRIPED BASS	NOT SAMPLED		108	28.5	13	1.8	2	.2	11	.6	176	3.0
STRIPED MULLET	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
SUMMER FLOUNDER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
TESSELLATED DARTER	NOT SAMPLED		12	3.2	27	3.8	25	2.7	28	1.5	42	.7
TIDEWATER SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WEAKFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE BASS	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		1	.3	3	.4	18	1.9	37	1.9	91	1.6
WHITE PERCH	NOT SAMPLED		141	37.2	337	47.0	319	33.8	442	23.2	1501	25.9
WHITE SUCKER	NOT SAMPLED		1	.3	0	.0	1	.1	5	.3	3	.1
YELLOW PERCH	NOT SAMPLED		0	.0	3	.4	0	.0	3	.2	3	.1
TOTAL			379		717		943		1909		5787	

TABLE V-2 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY ALL GEARS

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	86	1.5	46	.7	1	.0	16	.1	94	1.4	4	1.0	282	.63
AMERICAN EEL	32	.5	6	.1	5	.1	48	.4	50	.7	1	.2	216	.48
AMERICAN SHAD	587	10.1	257	3.9	86	2.2	203	1.7	1	.0	0	.0	1142	2.53
ATLANTIC MENHADEN	1	.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	.01
ATLANTIC NEEDLEFISH	4	.1	0	.0	17	.4	0	.0	0	.0	0	.0	21	.05
ATLANTIC SILVERSIDE	4	.1	33	.5	44	1.1	0	.0	0	.0	0	.0	81	.18
ATLANTIC STURGEON	0	.0	1	.0	0	.0	0	.0	0	.0	0	.0	9	.02
ATLANTIC TOMCOD	1221	20.9	35	.5	13	.3	44	.4	107	1.5	13	3.1	4347	9.64
BANDED KILLIFISH	58	1.0	128	1.9	128	3.2	88	.8	267	3.8	17	4.0	826	1.83
BAY ANCHOVY	292	5.0	1546	23.3	775	19.7	47	.4	7	.1	0	.0	2947	6.53
BLUEBACK HERRING	903	15.5	1697	25.5	112	2.8	6717	57.9	542	7.8	0	.0	10095	22.38
BLUEFISH	158	2.7	42	.6	14	.4	0	.0	0	.0	0	.0	329	.73
BLUEGILL	6	.1	3	.0	1	.0	14	.1	35	.5	0	.0	64	.14
BROWN BULLHEAD	2	.0	5	.1	0	.0	9	.1	4	.1	0	.0	34	.08
CARP	1	.0	3	.0	4	.1	3	.0	2	.0	0	.0	27	.06
COMMON SHINER	0	.0	0	.0	0	.0	0	.0	1	.0	0	.0	1	.00
CREVALLE JACK	0	.0	1	.0	0	.0	0	.0	0	.0	0	.0	1	.00
FOURSPINE STICKLEBACK	1	.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	.00
GIZZARD SHAD	0	.0	0	.0	0	.0	2	.0	89	1.3	56	13.3	150	.33
GOLDEN SHINER	3	.1	6	.1	2	.1	6	.1	16	.2	0	.0	141	.31
GOLDFISH	3	.1	5	.1	0	.0	0	.0	3	.0	0	.0	25	.06
HOGCHOKER	57	1.0	343	5.2	716	18.2	2655	22.9	4211	60.7	124	29.5	9342	20.71
LARGEMOUTH BASS	0	.0	3	.0	0	.0	1	.0	1	.0	0	.0	9	.02
LEPOMIS SP	9	.2	0	.0	0	.0	0	.0	0	.0	0	.0	10	.02
MUMMICHOG	1	.0	10	.2	20	.5	10	.1	14	.2	1	.2	59	.13
NORTHERN PIPEFISH	1	.0	17	.3	10	.3	0	.0	0	.0	0	.0	28	.06
PUMPKINSEED	99	1.7	72	1.1	54	1.4	56	.5	59	.9	0	.0	785	1.74
RAINBOW SMELT	26	.4	1	.0	0	.0	53	.5	1	.0	7	1.7	186	.41
REDBREAST SUNFISH	109	1.9	90	1.4	87	2.2	55	.5	37	.5	0	.0	681	1.51
ROUGH SILVERSIDE	1	.0	1	.0	21	.5	0	.0	0	.0	0	.0	68	.15
SHORTNOSE STURGEON	0	.0	0	.0	0	.0	0	.0	1	.0	0	.0	2	.00
SPOT	66	1.1	868	13.1	815	20.7	178	1.5	72	1.0	0	.0	1999	4.43
SPOTTAIL SHINER	180	3.1	93	1.4	52	1.3	73	.6	52	.7	11	2.6	848	1.88
STRIPED BASS	965	16.5	585	8.8	271	6.9	171	1.5	125	1.8	15	3.6	2442	5.41
STRIPED MULLET	0	.0	0	.0	2	.1	0	.0	0	.0	0	.0	2	.00
SUMMER FLOUNDER	0	.0	1	.0	0	.0	0	.0	0	.0	0	.0	1	.00
TESSELLATED DARTER	44	.8	15	.2	11	.3	14	.1	53	.8	2	.5	273	.61
TIDEWATER SILVERSIDE	0	.0	0	.0	4	.1	30	.3	1	.0	0	.0	35	.08
WEAKFISH	1	.0	34	.5	83	2.1	0	.0	0	.0	0	.0	118	.26
WHITE BASS	0	.0	0	.0	0	.0	0	.0	1	.0	0	.0	1	.00
WHITE CATFISH	4	.1	33	.5	100	2.5	49	.4	58	.8	9	2.1	403	.89
WHITE PERCH	907	15.5	653	9.8	494	12.5	1056	9.1	1028	14.8	157	37.4	7035	15.59
WHITE SUCKER	0	.0	1	.0	1	.0	0	.0	1	.0	3	.7	16	.04
YELLOW PERCH	2	.0	8	.1	0	.0	3	.0	3	.0	0	.0	25	.06
TOTAL	5834		6642		3943		11601		6936		420		45111	

TABLE V-3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FISH SPECIES INVENTORY

BOWLINE VICINITY - 1977

COMMON NAME	SCIENTIFIC NAME	MONTH OF OCCURRENCE											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Alewife	Alosa pseudoharengus	NS		X	X	X	X	X	X	X	X	X	X
American eel	Anguilla rostrata	NS		X	X	X	X	X	X	X	X	X	X
American shad	Alosa sapidissima	NS					X	X	X	X	X	X	
Atlantic menhaden	Brevoortia tyrannus	NS					X	X					
Atlantic needlefish	Strongylura marina	NS						X		X			
Atlantic silverside	Menidia menidia	NS						X	X	X			
Atlantic sturgeon	Acipenser oxyrhynchus	NS		X	X	X	X		X				X
Atlantic tomcod	Microgadus tomcod	NS	X	X	X	X	X	X	X	X	X	X	X
Banded killifish	Fundulus diaphanus	NS	X	X	X	X	X	X	X	X	X	X	X
Bay anchovy	Anchoa mitchilli	NS					X	X	X	X	X	X	
Blueback herring	Alosa aestivalis	NS				X	X	X	X	X	X	X	
Bluefish	Pomatomus saltatrix	NS					X	X	X	X			
Bluegill	Lepomis macrochirus	NS		X		X	X	X	X	X	X	X	
Brown bullhead	Ictalurus nebulosus	NS		X	X	X	X	X	X		X	X	
Carp	Cyprinus carpio	NS		X	X	X	X	X	X	X	X	X	
Common shiner	Notropis cornutus	NS										X	
Crevalle jack	Caranx hippos	NS							X				
Fourspine stickleback	Apeltes quadracus	NS			X			X					
Gizzard shad	Dorosoma cepedianum	NS		X							X	X	X
Golden shiner	Notemigonus crysoleucas	NS		X	X	X	X	X	X	X	X	X	
Goldfish	Carassius auratus	NS		X	X	X	X	X	X			X	
Hogchoker	Trinectes maculatus	NS	X	X	X	X	X	X	X	X	X	X	X
Largemouth bass	Micropterus salmoides	NS			X		X		X		X	X	
Mummichog	Fundulus heteroclitus	NS		X			X	X	X	X	X	X	X
Northern pipefish	Syngnathus fuscus	NS						X	X	X			
Pumpkinseed	Lepomis gibbosus	NS		X	X	X	X	X	X	X	X	X	
Rainbow smelt	Osmerus mordax	NS	X	X	X	X	X	X	X		X	X	X
Redbreast sunfish	Lepomis auritus	NS		X	X	X	X	X	X	X	X	X	
Rough silverside	Membras martinica	NS					X	X	X	X			
Shortnose sturgeon	Acipenser brevirostrum	NS			X							X	
Spot	Leiostomas xanthurus	NS						X	X	X	X	X	
Spottail shiner	Notropis hudsonius	NS		X	X	X	X	X	X	X	X	X	X
Striped bass	Morone saxatilis	NS	X	X	X	X	X	X	X	X	X	X	X
Striped mullet	Mugil cephalus	NS								X			
Summer flounder	Paralichthys dentatus	NS							X				
Sunfish (UID)	Lepomis sp.	NS		X				X					
Tessellated darter	Etheostoma olmstedi	NS	X	X	X	X	X	X	X	X	X	X	X
Tidewater silverside	Menidia beryllina	NS								X	X	X	
Weakfish	Cynoscion regalis	NS						X	X	X			
White bass	Morone chrysops	NS										X	
White catfish	Ictalurus catus	NS	X	X	X	X	X	X	X	X	X	X	X
White perch	Morone americana	NS	X	X	X	X	X	X	X	X	X	X	X
White sucker	Catostomus commersoni	NS	X		X	X	X		X	X		X	X
Yellow perch	Perca flavescens	NS		X		X	X	X	X		X	X	

NS - Not sampled

TABLE V-4

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

	JAN		FEB		MAR		APR		MAY		JUN	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		0	.0	0	.0	0	.0	5	.3	9	.2
AMERICAN EEL	NOT SAMPLED		0	.0	1	.3	11	1.5	22	1.5	28	.7
AMERICAN SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC MENHADEN	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	1	.0
ATLANTIC STURGEON	NOT SAMPLED		0	.0	1	.3	4	.5	1	.1	2	.1
ATLANTIC TOMCOD	NOT SAMPLED		100	27.0	34	8.5	47	6.3	364	25.2	2303	60.8
BAY ANCHOVY	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	8	.2
BLUEBACK HERRING	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	1	.0
BLUEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	1	.0
BROWN BULLHEAD	NOT SAMPLED		0	.0	2	.5	6	.8	2	.1	2	.1
CARP	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	2	.1
FOURSPINE STICKLEBACK	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0	0	.0
GIZZARD SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
GOLDFISH	NOT SAMPLED		0	.0	1	.3	0	.0	0	.0	3	.1
HOGCHOKER	NOT SAMPLED		1	.3	19	4.8	343	46.3	614	42.5	258	6.8
PUMPKINSEED	NOT SAMPLED		0	.0	0	.0	3	.4	8	.6	4	.1
RAINBOW SMELT	NOT SAMPLED		10	2.7	2	.5	0	.0	2	.1	18	.5
SHORTNOSE STURGEON	NOT SAMPLED		0	.0	0	.0	1	.1	0	.0	0	.0
SPOT	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
SPOTTAIL SHINER	NOT SAMPLED		0	.0	2	.5	6	.8	12	.8	0	.0
STRIPED BASS	NOT SAMPLED		108	29.2	6	1.5	1	.1	11	.8	82	2.2
SUMMER FLOUNDER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
TESSELLATED DARTER	NOT SAMPLED		10	2.7	11	2.8	1	.1	0	.0	0	.0
WEAKFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE BASS	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		1	.3	3	.8	17	2.3	37	2.6	90	2.4
WHITE PERCH	NOT SAMPLED		140	37.8	314	78.9	299	40.4	363	25.1	973	25.7
WHITE SUCKER	NOT SAMPLED		0	.0	0	.0	1	.1	3	.2	0	.0
YELLOW PERCH	NOT SAMPLED		0	.0	2	.5	0	.0	1	.1	1	.0
TOTAL			370		398		741		1445		3786	

TABLE V-4 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	50	1.6	2	.1	1	.0	11	.3	3	.1	0	.0	81	.34
AMERICAN EEL	32	1.0	3	.2	5	.2	47	1.1	48	.9	1	.3	198	.84
AMERICAN SHAD	101	3.3	2	.1	0	.0	12	.3	1	.0	0	.0	116	.49
ATLANTIC MENHADEN	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.00
ATLANTIC STURGEON	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	9	.04
ATLANTIC TOMCOD	1221	40.0	34	1.8	13	.6	44	1.0	107	2.0	13	4.0	4280	18.12
BAY ANCHOVY	215	7.0	35	1.9	38	1.7	12	.3	0	.0	0	.0	308	1.30
BLUEBACK HERRING	4	.1	0	.0	0	.0	3	.1	1	.0	0	.0	9	.04
BLUEFISH	7	.2	6	.3	4	.2	0	.0	0	.0	0	.0	18	.08
BROWN BULLHEAD	1	.0	1	.1	0	.0	9	.2	4	.1	0	.0	27	.11
CARP	0	.0	1	.1	2	.1	0	.0	0	.0	0	.0	5	.02
FOURSPINE STICKLEBACK	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.00
GIZZARD SHAD	0	.0	0	.0	0	.0	0	.0	0	.0	1	.3	1	.00
GOLDFISH	3	.1	0	.0	0	.0	0	.0	3	.1	0	.0	10	.04
HOGCHOKER	57	1.9	341	18.5	708	32.3	2652	63.2	4211	79.8	124	38.5	9328	39.49
PUMPKINSEED	2	.1	0	.0	2	.1	26	.6	3	.1	0	.0	48	.20
RAINBOW SMELT	25	.8	1	.1	0	.0	53	1.3	0	.0	0	.0	111	.47
SHORTNOSE STURGEON	0	.0	0	.0	0	.0	0	.0	1	.0	0	.0	2	.01
SPOT	66	2.2	838	45.5	809	36.9	178	4.2	71	1.3	0	.0	1962	8.31
SPOTTAIL SHINER	0	.0	0	.0	0	.0	7	.2	7	.1	8	2.5	42	.18
STRIPED BASS	693	22.7	256	13.9	53	2.4	65	1.5	34	.6	9	2.8	1318	5.58
SUMMER FLOUNDER	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	1	.00
TESSELLATED DARTER	0	.0	0	.0	0	.0	0	.0	0	.0	1	.3	23	.10
WEAKFISH	1	.0	34	1.8	82	3.7	0	.0	0	.0	0	.0	117	.50
WHITE BASS	0	.0	0	.0	0	.0	0	.0	1	.0	0	.0	1	.00
WHITE CATFISH	4	.1	26	1.4	99	4.5	49	1.2	52	1.0	8	2.5	386	1.63
WHITE PERCH	570	18.7	261	14.2	377	17.2	1024	24.4	725	13.7	154	47.8	5200	22.02
WHITE SUCKER	0	.0	0	.0	0	.0	0	.0	0	.0	3	.9	7	.03
YELLOW PERCH	1	.0	0	.0	0	.0	2	.0	2	.0	0	.0	9	.04
TOTAL	3053		1843		2193		4194		5274		322		23619	

Atlantic sturgeon

Date	Site	Length	Date	Site	Length
23 MAR 1977	BC	28.2	4 MAY 1977	BC	24.5
6 APR 1977	BID	32.2	1 JUN 1977	BC	54.4
6 APR 1977	BC	31.3	1 JUN 1977	BC	55.9
6 APR 1977	BC	34.8	24 AUG 1977	BC	40.6
20 APR 1977	BC	57.2			

Shortnose Sturgeon

Date	Site	Length	Date	Site	Length
20 APR 1977	BC	36.2	16 NOV 1977	BC	27.2

Biomass of fish followed the same generalized trends as abundance, with white perch accounting for 36% of the total biomass while hogchoker contributed 27%. Atlantic tomcod represented only 4% of the total biomass, although they constituted 18% of the total abundance (Table V-5).

(ii) Surface Trawls

Of the 1,257 fish collected in surface trawls in the river, 810 or 64% were bay anchovy; this species was followed in dominance by blueback herring (26%) (Table V-6). Although bay anchovy represented a significant portion of the population numerically, it accounted for less than 11% of the total biomass (Table V-7).

The same trend was demonstrated in Bowline Pond, where the bay anchovy represented 72% of the abundance (Table V-8) and

TABLE V-5

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	364.10	.9	195.10	.2
AMERICAN EEL	NOT SAMPLED		.00	.0	43.50	.3	558.20	2.7	1157.40	3.0	2293.00	2.9
AMERICAN SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC MENHADEN	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	429.80	.5
ATLANTIC STURGEON	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC TOMCOD	NOT SAMPLED		2281.40	9.6	821.10	5.6	1235.70	5.9	1246.37	3.2	5737.83	7.3
BAY ANCHOVY	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	27.50	.0
BLUEBACK HERRING	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	12.50	.0
BLUEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	4.50	.0
BROWN BULLHEAD	NOT SAMPLED		.00	.0	311.70	2.1	1016.20	4.9	294.60	.8	415.00	.5
CARP	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	9105.00	11.5
FOURSPINE STICKLEBACK	NOT SAMPLED		.00	.0	.00	.0	.70	.0	.00	.0	.00	.0
GIZZARD SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
GOLDFISH	NOT SAMPLED		.00	.0	779.00	5.3	.00	.0	.00	.0	2406.00	3.0
HOGCHOKER	NOT SAMPLED		25.70	.1	348.70	2.4	6560.00	31.3	10658.70	27.5	3031.60	3.8
PUMPKINSEED	NOT SAMPLED		.00	.0	.00	.0	139.50	.7	365.20	.9	164.00	.2
RAINBOW SMELT	NOT SAMPLED		56.60	.2	19.10	.1	.00	.0	5.80	.0	4.19	.0
SHORTNOSE STURGEON	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
SPOT	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
SPOTTAIL SHINER	NOT SAMPLED		.00	.0	24.60	.2	86.50	.4	140.30	.4	.00	.0
STRIPED BASS	NOT SAMPLED		14450.00	60.5	192.60	1.3	88.30	.4	2427.00	6.3	1810.20	2.3
SUMMER FLOUNDER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
TESSELLATED DARTER	NOT SAMPLED		22.50	.1	28.00	.2	4.70	.0	.00	.0	.00	.0
WEAKFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE BASS	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		3.90	.0	1673.60	11.4	1010.30	4.8	1084.10	2.8	5660.90	7.2
WHITE PERCH	NOT SAMPLED		7035.00	29.5	10232.60	69.6	10035.74	48.0	19716.50	50.9	47574.30	60.3
WHITE SUCKER	NOT SAMPLED		.00	.0	.00	.0	189.50	.9	1199.00	3.1	.00	.0
YELLOW PERCH	NOT SAMPLED		.00	.0	233.90	1.6	.00	.0	62.10	.2	73.50	.1
TOTAL			23875.10		14708.40		20925.34		38721.17		78944.92	

TABLE V-5 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	67.20	.2	3.80	.0	2.20	.0	28.80	.0	7.50	.0	.00	.0	668.70	.11
AMERICAN EEL	1794.00	4.3	144.80	.2	440.90	.5	3380.00	3.3	2258.80	2.2	15.70	.2	12086.30	2.05
AMERICAN SHAD	96.70	.2	5.00	.0	.00	.0	81.10	.1	4.30	.0	.00	.0	187.10	.03
ATLANTIC MENHADEN	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	429.80	.07
ATLANTIC STURGEON	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.00
ATLANTIC TOMCOD	7898.07	18.9	538.70	.8	65.60	.1	544.60	.5	3142.82	3.0	614.20	7.5	24126.39	4.09
BAY ANCHOVY	255.43	.6	60.97	.1	93.75	.1	12.86	.0	.00	.0	.00	.0	450.51	.08
BLUEBACK HERRING	3.00	.0	.00	.0	.00	.0	5.20	.0	1.50	.0	.00	.0	22.20	.00
BLUEFISH	249.50	.6	199.90	.3	285.00	.3	.00	.0	.00	.0	.00	.0	738.90	.13
BROWN BULLHEAD	.00	.0	303.30	.4	.00	.0	1774.20	1.7	683.30	.7	.00	.0	4798.30	.81
CARP	.00	.0	9183.40	13.4	11350.00	13.2	.00	.0	.00	.0	.00	.0	29638.40	5.03
FOURSPINE STICKLEBACK	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.70	.00
GIZZARD SHAD	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	57.00	.7	57.00	.01
GOLDFISH	1948.70	4.7	.00	.0	.00	.0	.00	.0	1704.00	1.6	.00	.0	6837.70	1.16
HOGCHOKER	851.00	2.0	7446.70	10.9	11158.40	13.0	50593.50	49.0	68793.60	65.6	1772.10	21.7	161240.00	27.35
PUMPKINSEED	20.70	.0	.00	.0	164.40	.2	1893.60	1.8	258.60	.2	.00	.0	3006.00	.51
RAINBOW SMELT	12.41	.0	.20	.0	.00	.0	111.90	.1	.00	.0	.00	.0	210.20	.04
SHORTNOSE STURGEON	.00	.0	.00	.0	.00	.0	.00	.0	88.40	.1	.00	.0	88.40	.01
SPOT	2326.88	5.6	34769.50	50.8	35368.62	41.1	7169.10	6.9	2754.25	2.6	.00	.0	82388.35	13.97
SPOTTAIL SHINER	.00	.0	.00	.0	.00	.0	79.10	.1	97.60	.1	103.80	1.3	531.90	.09
STRIPED BASS	701.00	1.7	589.00	.9	174.54	.2	431.20	.4	639.90	.6	45.50	.6	21549.24	3.66
SUMMER FLOUNDER	.00	.0	77.30	.1	.00	.0	.00	.0	.00	.0	.00	.0	77.30	.01
TESSELLATED DARTER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	4.90	.1	60.10	.01
WEAKFISH	.10	.0	133.80	.2	623.44	.7	.00	.0	.00	.0	.00	.0	757.34	.13
WHITE BASS	.00	.0	.00	.0	.00	.0	.00	.0	9.20	.0	.00	.0	9.20	.00
WHITE CATFISH	323.30	.8	1439.00	2.1	5718.18	6.6	3348.30	3.2	3597.70	3.4	1540.40	18.9	25399.68	4.31
WHITE PERCH	25130.78	60.1	13515.29	19.8	20594.38	23.9	33427.30	32.4	20649.10	19.7	2696.30	33.0	210607.29	35.72
WHITE SUCKER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	1312.40	16.1	2700.90	.46
YELLOW PERCH	103.60	.2	.00	.0	.00	.0	281.50	.3	148.90	.1	.00	.0	903.50	.15
TOTAL	41782.37		68410.66		86039.41		103162.26		104839.47		8162.30		589571.40	

TABLE V-6

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

SURFACE TRAWLS (BC,BID)

SPECIES	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
ALEWIFE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
AMERICAN SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC TOMCOD	NOT SAMPLED		0	.0	0	.0	0	.0	2	100.0	1	14.3
BAY ANCHOVY	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	5	71.4
BLUEBACK HERRING	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
BLUEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
HOGCHOKER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
RAINBOW SMELT	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
STRIPED BASS	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WEAKFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		0	.0	0	.0	1	8.3	0	.0	0	.0
WHITE PERCH	NOT SAMPLED		0	.0	3	100.0	11	91.7	0	.0	1	14.3
TOTAL			0		3		12		2		7	

SPECIES	JUL NO.	JUL PCNT	AUG NO.	AUG PCNT	SEP NO.	SEP PCNT	OCT NO.	OCT PCNT	NOV NO.	NOV PCNT	DEC NO.	DEC PCNT	TOTAL NO.	TOTAL PCNT
ALEWIFE	1	.3	0	.0	0	.0	3	5.7	2	5.4	0	.0	6	.48
AMERICAN SHAD	44	12.4	14	3.1	0	.0	12	22.6	0	.0	0	.0	70	5.57
ATLANTIC TOMCOD	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	.24
BAY ANCHOVY	61	17.1	431	95.1	303	92.4	10	18.9	0	.0	0	.0	810	64.44
BLUEBACK HERRING	247	69.4	7	1.5	20	6.1	28	52.8	26	70.3	0	.0	328	26.09
BLUEFISH	1	.3	1	.2	0	.0	0	.0	0	.0	0	.0	2	.16
HOGCHOKER	0	.0	0	.0	4	1.2	0	.0	0	.0	0	.0	4	.32
RAINBOW SMELT	1	.3	0	.0	0	.0	0	.0	1	2.7	4	66.7	6	.48
STRIPED BASS	0	.0	0	.0	0	.0	0	.0	1	2.7	0	.0	1	.08
WEAKFISH	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0	1	.08
WHITE CATFISH	0	.0	0	.0	0	.0	0	.0	5	13.5	0	.0	6	.48
WHITE PERCH	1	.3	0	.0	0	.0	0	.0	2	5.4	2	33.3	20	1.59
TOTAL	356		453		328		53		37		6		1257	

EC2A

3/15/77

TABLE V-7

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

SURFACE TRAWLS (BC,BID)

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
AMERICAN SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC TOMCOD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	1.20	100.0	1.00	1.2
BAY ANCHOVY	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	16.80	20.0
BLUEBACK HERRING	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
BLUEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
HOGCHOKER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
RAINBOW SMELT	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
STRIPED BASS	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WEAKFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		.00	.0	.00	.0	137.70	23.8	.00	.0	.00	.0
WHITE PERCH	NOT SAMPLED		.00	.0	184.80	100.0	441.40	76.2	.00	.0	66.20	78.8
TOTAL			.00		184.80		579.10		1.20		84.00	

SPECIES	JUL GM.	JUL PCNT	AUG GM.	AUG PCNT	SEP GM.	SEP PCNT	OCT GM.	OCT PCNT	NOV GM.	NOV PCNT	DEC GM.	DEC PCNT	TOTAL GM.	TOTAL PCNT
ALEWIFE	1.90	.5	.00	.0	.00	.0	16.40	13.2	11.80	2.1	.00	.0	30.10	1.29
AMERICAN SHAD	68.40	19.0	34.30	20.9	.00	.0	56.10	45.1	.00	.0	.00	.0	158.80	6.80
ATLANTIC TOMCOD	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.20	.09
BAY ANCHOVY	71.68	19.9	60.90	37.2	100.18	47.6	4.00	3.2	.00	.0	.00	.0	253.56	10.86
BLUEBACK HERRING	152.99	42.5	7.90	4.8	27.80	13.2	48.00	38.6	34.60	6.1	.00	.0	271.29	11.62
BLUEFISH	5.50	1.5	60.80	37.1	.00	.0	.00	.0	.00	.0	.00	.0	66.30	2.84
HOGCHOKER	.00	.0	.00	.0	80.60	38.3	.00	.0	.00	.0	.00	.0	80.60	3.45
RAINBOW SMELT	.40	.1	.00	.0	.00	.0	.00	.0	3.30	.6	8.10	13.0	11.80	.51
STRIPED BASS	.00	.0	.00	.0	.00	.0	.00	.0	81.40	14.4	.00	.0	81.40	3.49
WEAKFISH	.00	.0	.00	.0	1.70	.8	.00	.0	.00	.0	.00	.0	1.70	.07
WHITE CATFISH	.00	.0	.00	.0	.00	.0	.00	.0	338.60	59.8	.00	.0	476.30	20.39
WHITE PERCH	58.90	16.4	.00	.0	.00	.0	.00	.0	96.10	17.0	54.10	87.0	901.50	38.60
TOTAL	359.77		163.90		210.28		124.50		565.80		62.20		2335.55	

TABLE V-8

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION FOR SURFACE TRAWL COLLECTIONS
AT STATION 6P

SPECIES	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	33.3
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	33.3
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	1	33.3
GIZZARD SHAD	NOT SAMPLED		NOT SAMPLED		1	14.3	0	.0	0	.0	0	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		0	.0	5	50.0	0	.0	0	.0
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		0	.0	1	10.0	0	.0	0	.0
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		0	.0	0	.0	0	.0	0	.0
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		6	85.7	4	40.0	0	.0	0	.0
TOTAL					7		10		0		3	

SPECIES	JUL NO.	JUL PCNT	AUG NO.	AUG PCNT	SEP NO.	SEP PCNT	OCT NO.	OCT PCNT	NOV NO.	NOV PCNT	DEC NO.	DEC PCNT	TOTAL NO.	TOTAL PCNT
ALEWIFE	0	.0	2	.4	0	.0	0	.0	23	34.3	0	.0	25	3.02
AMERICAN SHAD	21	48.8	9	1.6	0	.0	1	.8	0	.0	0	.0	31	3.74
ATLANTIC TOMCOD	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.12
BAY ANCHOVY	16	37.2	549	97.9	12	100.0	16	13.2	0	.0	0	.0	594	71.74
BLUEBACK HERRING	6	14.0	1	.2	0	.0	104	86.0	38	56.7	0	.0	150	18.12
GIZZARD SHAD	0	.0	0	.0	0	.0	0	.0	4	6.0	1	25.0	6	.72
RAINBOW SMELT	0	.0	0	.0	0	.0	0	.0	0	.0	2	50.0	7	.85
SPOTTAIL SHINER	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.12
STRIPED BASS	0	.0	0	.0	0	.0	0	.0	1	1.5	0	.0	1	.12
WHITE CATFISH	0	.0	0	.0	0	.0	0	.0	0	.0	1	25.0	1	.12
WHITE PERCH	0	.0	0	.0	0	.0	0	.0	1	1.5	0	.0	11	1.33
TOTAL	43		561		12		121		67		4		828	

less than 2% the total biomass (Table V-9) collected in surface trawls. Blueback herring represented 18% of the pond collection.

(iii) Seines

During 1977, the shallow water areas along the west side of the Hudson River adjacent to the Bowline plant contained a fish community composed primarily of white perch, striped bass, bay anchovy, and blueback herring (Table V-10), while the Bowline Pond community was composed primarily of blueback herring, banded killifish, American shad, pumpkinseed sunfish, spottail shiner, and redbreasted sunfish (Table V-11). Essentially the same species assemblages were present at the river and pond stations, although the community structure exhibited different dominant species.

Carp provided the major biomass component for both the river (41%) (Table V-12) and pond (35%) (Table V-13) seine collections, although this taxon represented less than 1% of the abundance in either the river or the pond seine collections. White perch, pumpkinseed sunfish, and redbreasted sunfish contributed approximately 30% of the biomass of river and pond seines.

c. Spatial Variations

Catch per effort data, rather than the actual numbers or weight of fish collected, were employed in the comparison of spatial variations in order to correct for unequal sampling effort and to allow for future comparisons of abundance between stations, months, and years.

TABLE V-9

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION FOR SURFACE TRAWL COLLECTIONS
AT STATION BP

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
AMERICAN SHAD	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC TOMCOD	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	3.30	23.9
BAY ANCHOVY	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	1.60	11.6
BLUEBACK HERRING	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	8.90	64.5
GIZZARD SHAD	NOT SAMPLED		NOT SAMPLED		535.60	67.8	.00	.0	.00	.0	.00	.0
RAINBOW SMELT	NOT SAMPLED		NOT SAMPLED		.00	.0	12.20	6.7	.00	.0	.00	.0
SPOTTAIL SHINER	NOT SAMPLED		NOT SAMPLED		.00	.0	2.90	1.6	.00	.0	.00	.0
STRIPED BASS	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0
WHITE PERCH	NOT SAMPLED		NOT SAMPLED		254.10	32.2	166.00	91.7	.00	.0	.00	.0
TOTAL					789.70		181.10		.00		13.80	

SPECIES	JUL GM.	JUL PCNT	AUG GM.	AUG PCNT	SEP GM.	SEP PCNT	OCT GM.	OCT PCNT	NOV GM.	NOV PCNT	DEC GM.	DEC PCNT	TOTAL GM.	TOTAL PCNT
ALEWIFE	.00	.0	4.30	9.7	.00	.0	.00	.0	78.80	43.7	.00	.0	83.10	5.71
AMERICAN SHAD	24.00	85.6	18.90	42.6	.00	.0	3.60	2.7	.00	.0	.00	.0	46.50	3.20
ATLANTIC TOMCOD	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	3.30	.23
BAY ANCHOVY	.79	2.8	20.40	45.9	.43	100.0	4.10	3.0	.00	.0	.00	.0	27.32	1.88
BLUEBACK HERRING	3.24	11.6	.80	1.8	.00	.0	127.30	94.3	44.80	24.8	.00	.0	185.04	12.72
GIZZARD SHAD	.00	.0	.00	.0	.00	.0	.00	.0	26.20	14.5	43.70	53.5	605.50	41.62
RAINBOW SMELT	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	4.80	5.9	17.00	1.17
SPOTTAIL SHINER	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.90	.20
STRIPED BASS	.00	.0	.00	.0	.00	.0	.00	.0	27.90	15.5	.00	.0	27.90	1.92
WHITE CATFISH	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	33.20	40.6	33.20	2.28
WHITE PERCH	.00	.0	.00	.0	.00	.0	.00	.0	2.80	1.6	.00	.0	422.90	29.07
TOTAL	28.03		44.40		.43		135.00		180.50		81.70		1454.66	

TABLE V-10

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE RIVER SEINES

	JAN		FEB		MAR		APR		MAY		JUN	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		0	.0	0	.0	1	2.9	6	4.9	2	.2
AMERICAN EEL	NOT SAMPLED		0	.0	2	1.3	1	2.9	0	.0	2	.2
AMERICAN SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	6	.7
ATLANTIC MENHADEN	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC NEEDLEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC TOMCOD	NOT SAMPLED		0	.0	0	.0	0	.0	6	4.9	19	2.3
BANDED KILLIFISH	NOT SAMPLED		0	.0	1	.7	2	5.7	0	.0	9	1.1
BAY ANCHOVY	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	242	29.5
BLUEBACK HERRING	NOT SAMPLED		0	.0	0	.0	0	.0	14	11.5	41	5.0
BLUEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	50	6.1
BLUEGILL	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
CARP	NOT SAMPLED		0	.0	0	.0	3	8.6	0	.0	1	.1
CREVALLE JACK	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
FOURSPINE STICKLEBACK	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
GIZZARD SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
GOLDEN SHINER	NOT SAMPLED		0	.0	2	1.3	2	5.7	4	3.3	1	.1
GOLDFISH	NOT SAMPLED		0	.0	2	1.3	0	.0	0	.0	1	.1
HOGCHOKER	NOT SAMPLED		0	.0	0	.0	0	.0	1	.8	0	.0
MUMMICHOG	NOT SAMPLED		0	.0	1	.7	0	.0	0	.0	0	.0
NORTHERN PIPEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
PUMPKINSEED	NOT SAMPLED		0	.0	97	65.1	2	5.7	16	13.1	9	1.1
RAINBOW SMELT	NOT SAMPLED		0	.0	2	1.3	7	20.0	2	1.6	1	.1
REDBREAST SUNFISH	NOT SAMPLED		0	.0	14	9.4	1	2.9	36	29.5	4	.5
ROUGH SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	16	1.9
SPOT	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
SPOTTAIL SHINER	NOT SAMPLED		0	.0	20	13.4	6	17.1	19	15.6	97	11.8
STRIPED BASS	NOT SAMPLED		0	.0	1	.7	0	.0	0	.0	58	7.1
STRIPED MULLET	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
TESSELLATED DARTER	NOT SAMPLED		1	50.0	6	4.0	6	17.1	3	2.5	5	.6
TIDEWATER SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	1	.1
WHITE PERCH	NOT SAMPLED		0	.0	1	.7	4	11.4	11	9.0	256	31.2
WHITE SUCKER	NOT SAMPLED		1	50.0	0	.0	0	.0	2	1.6	0	.0
YELLOW PERCH	NOT SAMPLED		0	.0	0	.0	0	.0	2	1.6	0	.0
TOTAL			2		149		35		122		821	

TABLE V-10 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE RIVER SEINES

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	0	.0	41	3.3	0	.0	1	.1	0	.0	0	.0	51	1.14
AMERICAN EEL	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	6	.13
AMERICAN SHAD	130	20.1	137	11.2	45	11.2	93	10.1	0	.0	0	.0	411	9.19
ATLANTIC MENHADEN	1	.2	0	.0	0	.0	0	.0	0	.0	0	.0	1	.02
ATLANTIC NEEDLEFISH	1	.2	0	.0	0	.0	0	.0	0	.0	0	.0	1	.02
ATLANTIC SILVERSIDE	2	.3	19	1.5	15	3.7	0	.0	0	.0	0	.0	36	.81
ATLANTIC TOMCOD	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	26	.58
BANDED KILLIFISH	7	1.1	14	1.1	15	3.7	9	1.0	2	1.5	1	12.5	60	1.34
BAY ANCHOVY	0	.0	439	35.8	74	18.4	1	.1	0	.0	0	.0	756	16.91
BLUEBACK HERRING	38	5.9	27	2.2	47	11.7	679	73.7	50	36.5	0	.0	896	20.04
BLUEFISH	84	13.0	17	1.4	3	.7	0	.0	0	.0	0	.0	154	3.45
BLUEGILL	0	.0	1	.1	0	.0	2	.2	1	.7	0	.0	4	.09
CARP	1	.2	2	.2	0	.0	0	.0	0	.0	0	.0	7	.16
CREVALLE JACK	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	1	.02
FOURSPINE STICKLEBACK	1	.2	0	.0	0	.0	0	.0	0	.0	0	.0	1	.02
GIZZARD SHAD	0	.0	0	.0	0	.0	0	.0	21	15.3	2	25.0	23	.51
GOLDEN SHINER	0	.0	0	.0	0	.0	1	.1	0	.0	0	.0	10	.22
GOLDFISH	0	.0	4	.3	0	.0	0	.0	0	.0	0	.0	7	.16
HOGCHOKER	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	2	.04
MUMMICHOG	0	.0	1	.1	0	.0	0	.0	0	.0	0	.0	2	.04
NORTHERN PIPEFISH	0	.0	5	.4	3	.7	0	.0	0	.0	0	.0	8	.18
PUMPKINSEED	4	.6	0	.0	1	.2	6	.7	3	2.2	0	.0	138	3.09
RAINBOW SMELT	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	12	.27
REDBREAST SUNFISH	12	1.9	5	.4	5	1.2	4	.4	3	2.2	0	.0	84	1.88
ROUGH SILVERSIDE	1	.2	0	.0	9	2.2	0	.0	0	.0	0	.0	26	.58
SPOT	0	.0	21	1.7	4	1.0	0	.0	0	.0	0	.0	25	.56
SPOTTAIL SHINER	47	7.3	33	2.7	8	2.0	29	3.1	6	4.4	2	25.0	267	5.97
STRIPED BASS	147	22.8	223	18.2	152	37.8	83	9.0	43	31.4	3	37.5	710	15.88
STRIPED MULLET	0	.0	0	.0	2	.5	0	.0	0	.0	0	.0	2	.04
TESSELLATED DARTER	3	.5	2	.2	0	.0	0	.0	0	.0	0	.0	26	.58
TIDEWATER SILVERSIDE	0	.0	0	.0	0	.0	0	.0	1	.7	0	.0	1	.02
WHITE CATFISH	0	.0	3	.2	0	.0	0	.0	1	.7	0	.0	5	.11
WHITE PERCH	167	25.9	225	18.3	18	4.5	13	1.4	6	4.4	0	.0	701	15.68
WHITE SUCKER	0	.0	0	.0	1	.2	0	.0	0	.0	0	.0	4	.09
YELLOW PERCH	0	.0	4	.3	0	.0	0	.0	0	.0	0	.0	6	.13
TOTAL	646		1227		402		921		137		8		4470	

TABLE V-11

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE POND SEINES

	JAN		FEB		MAR		APR		MAY		JUN	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	NOT SAMPLED		0	.0	1	.6	3	2.1	8	2.4	0	.0
AMERICAN EEL	NOT SAMPLED		0	.0	1	.6	1	.7	0	.0	5	.4
AMERICAN SHAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	2	.2
ATLANTIC MENHADEN	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	1	.1
ATLANTIC NEEDLEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
ATLANTIC TOMCOD	NOT SAMPLED		1	14.3	1	.6	0	.0	1	.3	34	2.9
BANDED KILLIFISH	NOT SAMPLED		4	57.1	25	15.6	37	25.5	24	7.1	38	3.2
BAY ANCHOVY	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	24	2.1
BLUEBACK HERRING	NOT SAMPLED		0	.0	0	.0	0	.0	23	6.8	44	3.8
BLUEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	64	5.5
BLUEGILL	NOT SAMPLED		0	.0	1	.6	0	.0	3	.9	1	.1
BROWN BULLHEAD	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	2	.2
CARP	NOT SAMPLED		0	.0	1	.6	0	.0	1	.3	6	.5
COMMON SHINER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
GIZZARD SHAD	NOT SAMPLED		0	.0	2	1.3	0	.0	0	.0	0	.0
GOLDEN SHINER	NOT SAMPLED		0	.0	12	7.5	1	.7	11	3.2	75	6.4
GOLDFISH	NOT SAMPLED		0	.0	3	1.9	1	.7	1	.3	2	.2
HOGCHOKER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
LARGEMOUTH BASS	NOT SAMPLED		0	.0	0	.0	1	.7	0	.0	3	.3
LEPOMIS SP	NOT SAMPLED		0	.0	1	.6	0	.0	0	.0	0	.0
MUMMICHOG	NOT SAMPLED		0	.0	1	.6	0	.0	0	.0	1	.1
NORTHERN PIPEFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
PUMPKINSEED	NOT SAMPLED		0	.0	32	20.0	20	13.8	55	16.2	199	17.0
RAINBOW SMELT	NOT SAMPLED		0	.0	8	5.0	36	24.8	5	1.5	0	.0
REDBREAST SUNFISH	NOT SAMPLED		0	.0	23	14.4	15	10.3	53	15.6	157	13.4
ROUGH SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	29	2.5
SPOT	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
SPOTTAIL SHINER	NOT SAMPLED		0	.0	18	11.3	10	6.9	62	18.2	134	11.5
STRIPED BASS	NOT SAMPLED		0	.0	6	3.8	1	.7	0	.0	36	3.1
TESSELLATED DARTER	NOT SAMPLED		1	14.3	10	6.3	18	12.4	25	7.4	37	3.2
TIDEWATER SILVERSIDE	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE CATFISH	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	0	.0
WHITE PERCH	NOT SAMPLED		1	14.3	13	8.1	1	.7	68	20.0	271	23.2
WHITE SUCKER	NOT SAMPLED		0	.0	0	.0	0	.0	0	.0	3	.3
YELLOW PERCH	NOT SAMPLED		0	.0	1	.6	0	.0	0	.0	2	.2
TOTAL			7		160		145		340		1170	

TABLE V-11 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE POND SEINES

	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	35	2.0	1	.0	0	.0	1	.0	66	4.6	4	5.0	119	.80
AMERICAN EEL	0	.0	2	.1	0	.0	1	.0	2	.1	0	.0	12	.08
AMERICAN SHAD	291	16.8	95	3.7	41	4.1	85	1.3	0	.0	0	.0	514	3.44
ATLANTIC MENHADEN	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.01
ATLANTIC NEEDLEFISH	3	.2	0	.0	17	1.7	0	.0	0	.0	0	.0	20	.13
ATLANTIC SILVERSIDE	2	.1	14	.5	29	2.9	0	.0	0	.0	0	.0	45	.30
ATLANTIC TOMCOD	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	37	.25
BANDED KILLIFISH	51	2.9	114	4.5	113	11.2	79	1.3	265	18.6	16	20.0	766	5.13
BAY ANCHOVY	0	.0	92	3.6	348	34.5	8	.1	7	.5	0	.0	479	3.21
BLUEBACK HERRING	608	35.0	1662	65.0	45	4.5	5903	93.5	427	30.0	0	.0	8712	58.32
BLUEFISH	66	3.8	18	.7	7	.7	0	.0	0	.0	0	.0	155	1.04
BLUEGILL	6	.3	2	.1	1	.1	12	.2	34	2.4	0	.0	60	.40
BROWN BULLHEAD	1	.1	4	.2	0	.0	0	.0	0	.0	0	.0	7	.05
CARP	0	.0	0	.0	2	.2	3	.0	2	.1	0	.0	15	.10
COMMON SHINER	0	.0	0	.0	0	.0	0	.0	1	.1	0	.0	1	.01
GIZZARD SHAD	0	.0	0	.0	0	.0	2	.0	64	4.5	52	65.0	120	.80
GOLDEN SHINER	3	.2	6	.2	2	.2	5	.1	16	1.1	0	.0	131	.88
GOLDFISH	0	.0	1	.0	0	.0	0	.0	0	.0	0	.0	8	.05
HOGCHOKER	0	.0	1	.0	4	.4	3	.0	0	.0	0	.0	8	.05
LARGEMOUTH BASS	0	.0	3	.1	0	.0	1	.0	1	.1	0	.0	9	.06
LEPOMIS SP	9	.5	0	.0	0	.0	0	.0	0	.0	0	.0	10	.07
MUMMICHOG	1	.1	9	.4	20	2.0	10	.2	14	1.0	1	1.3	57	.38
NORTHERN PIPEFISH	1	.1	12	.5	7	.7	0	.0	0	.0	0	.0	20	.13
PUMPKINSEED	93	5.4	72	2.8	51	5.1	24	.4	53	3.7	0	.0	599	4.01
RAINBOW SMELT	0	.0	0	.0	0	.0	0	.0	0	.0	1	1.3	50	.33
REDBREAST SUNFISH	97	5.6	85	3.3	82	8.1	51	.8	34	2.4	0	.0	597	4.00
ROUGH SILVERSIDE	0	.0	1	.0	12	1.2	0	.0	0	.0	0	.0	42	.28
SPOT	0	.0	9	.4	2	.2	0	.0	1	.1	0	.0	12	.08
SPOTTAIL SHINER	133	7.7	60	2.3	44	4.4	37	.6	39	2.7	1	1.3	538	3.60
STRIPED BASS	125	7.2	106	4.1	66	6.5	23	.4	46	3.2	3	3.8	412	2.76
TESSELLATED DARTER	41	2.4	13	.5	11	1.1	14	.2	53	3.7	1	1.3	224	1.50
TIDEWATER SILVERSIDE	0	.0	0	.0	4	.4	30	.5	0	.0	0	.0	34	.23
WHITE CATFISH	0	.0	4	.2	1	.1	0	.0	0	.0	0	.0	5	.03
WHITE PERCH	169	9.7	167	6.5	99	9.8	19	.3	294	20.7	1	1.3	1103	7.38
WHITE SUCKER	0	.0	1	.0	0	.0	0	.0	1	.1	0	.0	5	.03
YELLOW PERCH	1	.1	4	.2	0	.0	1	.0	1	.1	0	.0	10	.07
TOTAL	1736		2558		1008		6312		1421		80		14937	

TABLE V-12

CRANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE RIVER SEINES

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		.00	.0	.00	.0	294.00	1.8	1232.00	19.3	19.50	.2
AMERICAN EEL	NOT SAMPLED		.00	.0	69.80	1.2	83.80	.5	.00	.0	24.60	.2
AMERICAN SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	18.00	.1
ATLANTIC MENHADEN	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC NEEDLEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC TOMCOD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	2.90	.0	27.60	.2
BANDED KILLIFISH	NOT SAMPLED		.00	.0	1.00	.0	3.70	.0	.00	.0	46.70	.4
BAY ANCHOVY	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	565.28	4.5
BLUEBACK HERRING	NOT SAMPLED		.00	.0	.00	.0	.00	.0	123.74	1.9	496.00	4.0
BLUEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	228.90	1.8
BLUEGILL	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
CARP	NOT SAMPLED		.00	.0	.00	.0	15096.00	93.1	.00	.0	5070.00	40.5
CREVALLE JACK	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
FOURSPINE STICKLEBACK	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
GIZZARD SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
GOLDEN SHINER	NOT SAMPLED		.00	.0	99.50	1.6	80.20	.5	251.10	3.9	167.70	1.3
GOLDFISH	NOT SAMPLED		.00	.0	818.00	13.5	.00	.0	.00	.0	646.00	5.2
HOGCHOKER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	40.50	.6	.00	.0
MUMMICHOG	NOT SAMPLED		.00	.0	1.00	.0	.00	.0	.00	.0	.00	.0
NORTHERN PIPEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
PUMPKINSEED	NOT SAMPLED		.00	.0	4295.90	71.0	150.90	.9	952.90	14.9	555.90	4.4
RAINBOW SMELT	NOT SAMPLED		.00	.0	19.70	.3	15.40	.1	11.80	.2	.10	.0
REDBREAST SUNFISH	NOT SAMPLED		.00	.0	555.00	9.2	65.90	.4	1785.50	28.0	214.60	1.7
ROUGH SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	95.30	.8
SPOT	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
SPOTTAIL SHINER	NOT SAMPLED		.00	.0	164.50	2.7	50.70	.3	98.00	1.5	716.10	5.7
STRIPED BASS	NOT SAMPLED		.00	.0	4.80	.1	.00	.0	.00	.0	94.80	.8
STRIPED MULLET	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
TESSELLATED DARTER	NOT SAMPLED		3.20	.2	15.80	.3	18.70	.1	12.30	.2	15.00	.1
TIDEWATER SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	582.60	4.7
WHITE PERCH	NOT SAMPLED		.00	.0	4.40	.1	357.60	2.2	668.30	10.5	2928.10	23.4
WHITE SUCKER	NOT SAMPLED		1385.00	99.8	.00	.0	.00	.0	1047.80	16.4	.00	.0
YELLOW PERCH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	154.50	2.4	.00	.0
TOTAL			1388.20		6049.40		16216.90		6381.34		12512.78	

E02A

TABLE V-12 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE RIVER SEINES

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	.00	.0	81.10	.4	.00	.0	1.40	.0	.00	.0	.00	.0	1628.00	2.10
AMERICAN EEL	.00	.0	2.10	.0	.00	.0	.00	.0	.00	.0	.00	.0	180.30	.23
AMERICAN SHAD	124.68	1.7	243.70	1.2	106.50	3.9	304.80	10.6	.00	.0	.00	.0	797.68	1.03
ATLANTIC MENHADEN	7.60	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	7.60	.01
ATLANTIC NEEDLEFISH	2.80	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.80	.00
ATLANTIC SILVERSIDE	2.60	.0	46.20	.2	44.50	1.6	.00	.0	.00	.0	.00	.0	93.30	.12
ATLANTIC TOMCOD	.00	.0	5.50	.0	.00	.0	.00	.0	.00	.0	.00	.0	36.00	.05
BANDED KILLIFISH	28.40	.4	8.70	.0	44.70	1.6	38.30	1.3	5.10	.3	1.80	3.4	178.40	.23
BAY ANCHOVY	.00	.0	208.52	1.0	28.20	1.0	1.90	.1	.00	.0	.00	.0	803.90	1.04
BLUEBACK HERRING	22.70	.3	28.00	.1	58.60	2.1	821.30	28.4	61.20	3.6	.00	.0	1611.54	2.08
BLUEFISH	1432.18	19.3	430.30	2.1	176.60	6.4	.00	.0	.00	.0	.00	.0	2267.98	2.92
BLUEGILL	.00	.0	.10	.0	.00	.0	5.10	.2	115.50	6.8	.00	.0	120.70	.16
CARP	1190.00	16.0	10515.00	52.0	.00	.0	.00	.0	.00	.0	.00	.0	31871.00	41.08
CREVALLE JACK	.00	.0	9.10	.0	.00	.0	.00	.0	.00	.0	.00	.0	9.10	.01
FOURSPINE STICKLEBACK	.40	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.40	.00
GIZZARD SHAD	.00	.0	.00	.0	.00	.0	.00	.0	507.30	29.8	14.70	27.8	522.00	.67
GOLDEN SHINER	.00	.0	.00	.0	.00	.0	125.60	4.3	.00	.0	.00	.0	724.10	.93
GOLDFISH	.00	.0	2514.30	12.4	.00	.0	.00	.0	.00	.0	.00	.0	3978.30	5.13
HOGCHOKER	.00	.0	16.50	.1	.00	.0	.00	.0	.00	.0	.00	.0	57.00	.07
MUMMICHOG	.00	.0	.30	.0	.00	.0	.00	.0	.00	.0	.00	.0	1.30	.00
NORTHERN PIPEFISH	.00	.0	.50	.0	2.10	.1	.00	.0	.00	.0	.00	.0	2.60	.00
PUMPKINSEED	206.20	2.8	.00	.0	59.60	2.2	496.60	17.2	195.10	11.5	.00	.0	6913.10	8.91
RAINBOW SMELT	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	47.00	.06
REDBREAST SUNFISH	533.40	7.2	291.80	1.4	319.90	11.6	297.40	10.3	150.50	8.9	.00	.0	4214.00	5.43
ROUGH SILVERSIDE	4.90	.1	.00	.0	22.70	.8	.00	.0	.00	.0	.00	.0	122.90	.16
SPOT	.00	.0	599.60	3.0	135.30	4.9	.00	.0	.00	.0	.00	.0	734.90	.95
SPOTTAIL SHINER	366.07	4.9	195.60	1.0	51.30	1.9	308.20	10.7	60.80	3.6	22.90	43.3	2034.17	2.62
STRIPED BASS	1027.50	13.8	576.90	2.9	478.40	17.4	321.90	11.1	184.30	10.8	13.50	25.5	2702.10	3.48
STRIPED MULLET	.00	.0	.00	.0	325.20	11.8	.00	.0	.00	.0	.00	.0	325.20	.42
TESSELLATED DARTER	4.70	.1	3.30	.0	.00	.0	.00	.0	.00	.0	.00	.0	73.00	.09
TIDEWATER SILVERSIDE	.00	.0	.00	.0	.00	.0	.00	.0	1.10	.1	.00	.0	1.10	.00
WHITE CATFISH	.00	.0	301.20	1.5	.00	.0	.00	.0	128.00	7.5	.00	.0	1011.80	1.30
WHITE PERCH	2468.60	33.3	3833.00	19.0	412.80	15.0	165.60	5.7	291.10	17.1	.00	.0	11129.50	14.34
WHITE SUCKER	.00	.0	.00	.0	487.70	17.7	.00	.0	.00	.0	.00	.0	2920.50	3.76
YELLOW PERCH	.00	.0	307.40	1.5	.00	.0	.00	.0	.00	.0	.00	.0	461.90	.60
TOTAL	7422.73		20218.72		2754.10		2888.10		1700.00		52.90		77585.17	

TABLE V-13

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE POND SEINES

SPECIES	JAN GM.	JAN PCNT	FEB GM.	FEB PCNT	MAR GM.	MAR PCNT	APR GM.	APR PCNT	MAY GM.	MAY PCNT	JUN GM.	JUN PCNT
ALEWIFE	NOT SAMPLED		.00	.0	338.80	3.0	974.00	27.5	1181.00	9.8	.00	.0
AMERICAN EEL	NOT SAMPLED		.00	.0	.90	.0	.60	.0	.00	.0	191.50	.4
AMERICAN SHAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC MENHADEN	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	11.90	.0
ATLANTIC NEEDLEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
ATLANTIC TOMCOD	NOT SAMPLED		26.40	17.8	10.40	.1	.00	.0	.20	.0	58.60	.1
BANDED KILLIFISH	NOT SAMPLED		3.50	2.4	55.90	.5	125.00	3.5	107.70	.9	193.20	.4
BAY ANCHOVY	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	40.40	.1
BLUEBACK HERRING	NOT SAMPLED		.00	.0	.00	.0	.00	.0	303.60	2.5	357.00	.8
BLUEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	751.67	1.7
BLUEGILL	NOT SAMPLED		.00	.0	108.40	1.0	.00	.0	3.30	.0	2.80	.0
BROWN BULLHEAD	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	425.20	1.0
CARP	NOT SAMPLED		.00	.0	4460.00	40.0	.00	.0	5670.00	47.3	19978.00	45.3
COMMON SHINER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
GIZZARD SHAD	NOT SAMPLED		.00	.0	452.90	4.1	.00	.0	.00	.0	.00	.0
GOLDEN SHINER	NOT SAMPLED		.00	.0	957.20	8.6	38.00	1.1	470.40	3.9	4842.20	11.0
GOLDFISH	NOT SAMPLED		.00	.0	1900.00	17.1	240.00	6.8	515.00	4.3	811.70	1.8
HOGCHOKER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
LARGEMOUTH BASS	NOT SAMPLED		.00	.0	.00	.0	1139.00	32.1	.00	.0	865.40	2.0
LEPOMIS SP	NOT SAMPLED		.00	.0	.10	.0	.00	.0	.00	.0	.00	.0
MUMMICHOG	NOT SAMPLED		.00	.0	6.90	.1	.00	.0	.00	.0	4.60	.0
NORTHERN PIPEFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
PUMPKINSEED	NOT SAMPLED		.00	.0	1018.90	9.1	490.00	13.8	869.60	7.2	3044.10	6.9
RAINBOW SMELT	NOT SAMPLED		.00	.0	21.80	.2	80.30	2.3	14.90	.1	.00	.0
REDBREAST SUNFISH	NOT SAMPLED		.00	.0	584.60	5.2	287.50	8.1	1735.60	14.5	4188.30	9.5
ROUGH SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	181.00	.4
SPOT	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
SPOTTAIL SHINER	NOT SAMPLED		.00	.0	104.50	.9	80.10	2.3	243.16	2.0	617.80	1.4
STRIPED BASS	NOT SAMPLED		.00	.0	522.60	4.7	28.00	.8	.00	.0	65.60	.1
TESSELLATED DARTER	NOT SAMPLED		4.50	3.0	22.10	.2	44.80	1.3	54.90	.5	73.80	.2
TIDEWATER SILVERSIDE	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE CATFISH	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
WHITE PERCH	NOT SAMPLED		114.10	76.8	301.40	2.7	17.00	.5	827.90	6.9	7008.60	15.9
WHITE SUCKER	NOT SAMPLED		.00	.0	.00	.0	.00	.0	.00	.0	322.70	.7
YELLOW PERCH	NOT SAMPLED		.00	.0	275.40	2.5	.00	.0	.00	.0	102.40	.2
TOTAL			148.50		11142.80		3544.30		11997.26		44138.47	

TABLE V-13 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF COMBINED COLLECTIONS

BOWLINE POND SEINES

SPECIES	JUL		AUG		SEP		OCT		NOV		DEC		TOTAL	
	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	36.30	.4	51.00	.3	.00	.0	1.50	.0	183.90	1.2	11.80	2.9	2778.30	1.88
AMERICAN EEL	.00	.0	314.50	2.1	.00	.0	146.30	.7	100.40	.7	.00	.0	754.20	.51
AMERICAN SHAD	222.91	2.4	149.40	1.0	97.60	.6	265.23	1.2	.00	.0	.00	.0	735.14	.50
ATLANTIC MENHADEN	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	11.90	.01
ATLANTIC NEEDLEFISH	12.80	.1	.00	.0	512.30	3.2	.00	.0	.00	.0	.00	.0	525.10	.36
ATLANTIC SILVERSIDE	1.20	.0	20.10	.1	70.70	.4	.00	.0	.00	.0	.00	.0	92.00	.06
ATLANTIC TOMCOD	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	95.60	.06
BANDED KILLIFISH	28.40	.3	104.70	.7	183.40	1.2	127.20	.6	549.90	3.6	39.70	9.6	1518.60	1.03
BAY ANCHOVY	.00	.0	24.45	.2	74.19	.5	3.20	.0	3.10	.0	.00	.0	145.34	.10
BLUEBACK HERRING	264.40	2.9	1552.50	10.6	53.60	.3	8067.39	37.6	433.25	2.8	.00	.0	11031.74	7.46
BLUEFISH	1208.20	13.1	528.90	3.6	601.80	3.8	.00	.0	.00	.0	.00	.0	3090.57	2.09
BLUEGILL	111.70	1.2	15.50	.1	2.40	.0	10.00	.0	68.10	.4	.00	.0	322.20	.22
BROWN BULLHEAD	114.10	1.2	926.00	6.3	.00	.0	.00	.0	.00	.0	.00	.0	1465.30	.99
CARP	.00	.0	.00	.0	6712.70	42.3	9236.00	43.0	6281.20	41.3	.00	.0	52337.90	35.39
COMMON SHINER	.00	.0	.00	.0	.00	.0	.00	.0	.70	.0	.00	.0	.70	.00
GIZZARD SHAD	.00	.0	.00	.0	.00	.0	81.10	.4	553.10	3.6	325.70	79.0	1412.80	.96
GOLDEN SHINER	65.40	.7	251.00	1.7	119.70	.8	83.40	.4	742.00	4.9	.00	.0	7569.30	5.12
GOLDFISH	.00	.0	362.70	2.5	.00	.0	.00	.0	.00	.0	.00	.0	3829.40	2.59
HOGCHOKER	.00	.0	.30	.0	2.70	.0	1.90	.0	.00	.0	.00	.0	4.90	.00
LARGEMOUTH BASS	.00	.0	807.90	5.5	.00	.0	20.60	.1	26.90	.2	.00	.0	2859.80	1.93
LEPOMIS SP	1.90	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.00	.00
MUMMICHOG	1.70	.0	16.40	.1	57.30	.4	37.00	.2	87.10	.6	3.20	.8	214.20	.14
NORTHERN PIPEFISH	.10	.0	5.90	.0	4.30	.0	.00	.0	.00	.0	.00	.0	10.30	.01
PUMPKINSEED	1642.00	17.8	1625.90	11.1	1769.40	11.1	935.80	4.4	1295.80	8.5	.00	.0	12691.50	8.58
RAINBOW SMELT	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	2.30	.6	119.30	.08
REDBREAST SUNFISH	2614.90	28.3	1943.30	13.2	3248.44	20.4	1792.80	8.3	2240.20	14.7	.00	.0	18635.64	12.60
ROUGH SILVERSIDE	.00	.0	.50	.0	24.30	.2	.00	.0	.00	.0	.00	.0	205.80	.14
SPOT	.00	.0	281.40	1.9	61.40	.4	.00	.0	33.90	.2	.00	.0	376.70	.25
SPOTTAIL SHINER	386.80	4.2	142.70	1.0	150.30	.9	248.10	1.2	200.60	1.3	4.50	1.1	2178.56	1.47
STRIPED BASS	62.00	.7	363.80	2.5	170.20	1.1	116.10	.5	262.60	1.7	14.90	3.6	1605.80	1.09
TESSELLATED DARTER	33.70	.4	15.90	.1	17.60	.1	28.60	.1	173.52	1.1	5.40	1.3	474.82	.32
TIDEWATER SILVERSIDE	.00	.0	.00	.0	1.30	.0	17.50	.1	.00	.0	.00	.0	18.80	.01
WHITE CATFISH	.00	.0	1068.20	7.3	98.40	.6	.00	.0	.00	.0	.00	.0	1166.60	.79
WHITE PERCH	2403.60	26.0	3232.10	22.0	1853.70	11.7	188.50	.9	1270.60	8.4	4.60	1.1	17220.10	11.65
WHITE SUCKER	.00	.0	389.90	2.7	.00	.0	.00	.0	567.00	3.7	.00	.0	1279.60	.87
YELLOW PERCH	31.40	.3	472.50	3.2	.00	.0	72.80	.3	139.10	.9	.00	.0	1093.60	.74
TOTAL	9243.51		14667.45		15887.73		21479.02		15212.97		412.10		147874.11	

White perch and spot demonstrated approximately equal distribution between the three bottom trawl stations (BB, BID, and BC). Atlantic tomcod were distributed fairly evenly between BID and BC, but exhibited a greatly reduced occurrence in the shallow BB area. In general, the assemblages at BC and BID were similar, while BB exhibited a different fish assemblage which consisted of higher abundances of striped bass, pumpkinseed, and bay anchovy and lower abundances of Atlantic tomcod and hogchoker (Tables V-14 through V-16).

More species were collected at BB (25 species) than at either BC or BID (16 and 21 species, respectively); this was partly a result of the location of BB between the shallow shoreline on the west side and the deeper water near BID on the east. Both pelagic and littoral species were collected at this station.

Surface trawl collections demonstrated slightly higher abundances in the pond (Table V-17) than in the river (Table V-18), due primarily to a greater concentration of bay anchovy in the pond. Abundances from pond seine collections (Table V-19) were almost three times those found in the corresponding river seine collections (Table V-20). As noted previously, species dominance was also different between the pond and the river.

d. Temporal Variations

Population fluctuations in the bottom trawl collections were marked primarily by the movement of the hogchoker, Atlantic tomcod, spot, striped bass, and white perch. Hogchoker and white perch abundance was greatest during October and November, concomitant with the seasonal movement of young-of-the-year fish. Atlantic tomcod were most abundant in the trawl collections during June and July when juveniles were recruited into

TABLE V-14

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION 88

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.00	4.00	3.33
AMERICAN EEL	NS	.00	.00	.83	.00	.00
AMERICAN SHAD	NS	.00	.00	.00	.00	.00
ATLANTIC TOMCOD	NS	2.86	.00	1.67	4.86	134.11
BAY ANCHOVY	NS	.00	.00	.00	.00	2.08
BLUEBACK HERRING	NS	.00	.00	.00	.00	.42
BLUEFISH	NS	.00	.00	.00	.00	.48
BROWN BULLHEAD	NS	.00	.56	4.88	1.00	.83
CARP	NS	.00	.00	.00	.00	.95
FOURSPINE STICKLEBACK	NS	.00	.00	.83	.00	.00
GIZZARD SHAD	NS	.00	.00	.00	.00	.00
GOLDFISH	NS	.00	.56	.00	.00	1.25
HOGCHOKER	NS	.00	.56	.00	.00	3.10
PUMPKINSEED	NS	.00	.00	2.14	6.29	1.67
RAINBOW SMELT	NS	11.43	.72	.00	1.72	2.32
SPOT	NS	.00	.00	.00	.00	.00
SPOTTAIL SHINER	NS	.00	1.11	4.29	8.72	.00
STRIPED BASS	NS	15.71	1.43	.72	8.14	34.46
SUMMER FLOUNDER	NS	.00	.00	.00	.00	.00
TESSELLATED DARTER	NS	8.57	5.56	.00	.00	.00
WHITE BASS	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.00	.56	.00	.00	1.31
WHITE PERCH	NS	22.86	10.56	89.05	157.72	110.24
WHITE SUCKER	NS	.00	.00	.83	1.43	.00
YELLOW PERCH	NS	.00	1.43	.00	.72	.42
TOTAL SPECIES MONTHLY MEAN	NS	61.43	23.02	105.24	194.58	296.96
UNITS OF EFFORT* PERFORMED	.00	.70	1.60	1.30	1.20	2.30

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

E03A

TABLE V-14 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION BB

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	27.70	.56	.00	3.13	1.25	.00	3.63
AMERICAN EEL	.00	.00	.00	.63	.00	.00	.13
AMERICAN SHAD	56.98	.56	.00	.00	.42	.00	5.27
ATLANTIC TOMCOD	.00	.00	.00	.00	.00	.00	13.04
BAY ANCHOVY	101.98	7.92	3.13	.00	.00	.00	10.46
BLUEBACK HERRING	2.22	.00	.00	1.88	.42	.00	.45
BLUEFISH	2.38	1.74	1.25	.00	.00	.00	.53
BROWN BULLHEAD	.00	.00	.00	1.88	1.11	.00	.93
CARP	.00	.00	.00	.00	.00	.00	.09
FOURSPINE STICKLEBACK	.00	.00	.00	.00	.00	.00	.08
GIZZARD SHAD	.00	.00	.00	.00	.00	1.43	.13
GOLDFISH	1.83	.00	.00	.00	1.67	.00	.48
HOGCHOKER	3.49	3.13	5.00	3.13	.00	.00	1.67
PUMPKINSEED	1.11	.00	1.25	16.25	.83	.00	2.69
RAINBOW SMELT	.00	.00	.00	.63	.00	.00	1.53
SPOT	19.29	264.10	98.75	23.13	.83	.00	36.92
SPOTTAIL SHINER	.00	.00	.00	4.38	3.51	11.43	3.04
STRIPED BASS	440.08	106.60	19.38	32.50	13.33	10.00	62.03
SUMMER FLOUNDER	.00	.63	.00	.00	.00	.00	.06
TESSELLATED DARTER	.00	.00	.00	.00	.00	1.43	1.41
WHITE BASS	.00	.00	.00	.00	.56	.00	.05
WHITE CATFISH	.00	.63	1.25	.63	3.25	.00	.69
WHITE PERCH	35.56	13.54	5.00	163.13	234.37	1.43	76.68
WHITE SUCKER	.00	.00	.00	.00	.00	2.86	.47
YELLOW PERCH	.56	.00	.00	1.25	.97	.00	.49
TOTAL SPECIES MONTHLY MEAN	693.18	399.38	135.00	252.50	262.52	28.57	222.94
UNITS OF EFFORT* PERFORMED	1.60	1.70	1.60	1.60	2.10	.70	16.40

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-15

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION B1D

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.00	.28	.00
AMERICAN EEL	NS	.00	.36	2.39	5.13	2.00
AMERICAN SHAD	NS	.00	.00	.00	.00	.00
ATLANTIC MENHADEN	NS	.00	.00	.00	.00	.26
ATLANTIC STURGEON	NS	.00	.00	.39	.00	.00
ATLANTIC TOMCOD	NS	38.33	11.76	15.28	68.79	224.65
BAY ANCHOVY	NS	.00	.00	.00	.00	.77
BLUEFISH	NS	.00	.00	.00	.00	.00
BROWN BULLHEAD	NS	.00	.00	.00	.29	.00
CARP	NS	.00	.00	.00	.00	.00
HOGCHOKER	NS	.83	3.79	39.00	50.12	32.19
PUMPKINSEED	NS	.00	.00	.00	.00	.00
RAINBOW SMELT	NS	.00	.36	.00	.00	.00
SPOT	NS	.00	.00	.00	.00	.00
SPOTTAIL SHINER	NS	.00	.00	.00	.28	.00
STRIPED BASS	NS	34.17	1.43	.00	.00	1.43
TESSELLATED DARTER	NS	3.33	.36	.33	.00	.00
WEAKFISH	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.83	.74	4.97	3.99	3.13
WHITE PERCH	NS	20.00	40.85	60.92	13.46	87.73
WHITE SUCKER	NS	.00	.00	.00	.28	.00
TOTAL SPECIES MONTHLY MEAN	NS	97.50	59.65	123.28	142.62	352.15
UNITS OF EFFORT* PERFORMED	.00	1.20	2.70	2.80	3.50	3.70

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-15 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION BID

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	.33	.39	.00	.46	.00	.00	.13
AMERICAN EEL	1.00	.72	1.54	11.15	10.60	.00	3.17
AMERICAN SHAD	.33	.00	.00	.46	.00	.00	.07
ATLANTIC MENHADEN	.00	.00	.00	.00	.00	.00	.02
ATLANTIC STURGEON	.00	.00	.00	.00	.00	.00	.04
ATLANTIC TOMCOD	141.33	9.23	4.23	13.50	23.68	6.88	50.70
BAY ANCHOVY	9.67	1.15	1.54	.00	.00	.00	1.19
BLUEFISH	.33	.39	.39	.00	.00	.00	.10
BROWN BULLHEAD	.33	.39	.00	1.82	.61	.00	.31
CARP	.00	.33	.77	.00	.00	.00	.10
HOGCHOKER	10.00	68.67	107.31	177.52	84.24	3.75	52.49
PUMPKINSEED	.00	.00	.00	.00	.21	.00	.02
RAINBOW SMELT	5.00	.00	.00	.91	.00	.00	.57
SPOT	5.67	85.03	82.31	10.11	12.12	.00	17.75
SPOTTAIL SHINER	.00	.00	.00	.00	.00	.00	.03
STRIPED BASS	1.33	22.85	5.39	1.36	1.12	.63	6.34
TESSELLATED DARTER	.00	.00	.00	.00	.00	.00	.37
WEAKFISH	.00	6.00	1.54	.00	.00	.00	.69
WHITE CATFISH	1.33	5.77	35.77	15.42	6.10	1.25	7.21
WHITE PERCH	155.67	67.72	100.77	168.39	30.52	9.38	68.67
WHITE SUCKER	.00	.00	.00	.00	.00	.63	.08
TOTAL SPECIES MONTHLY MEAN	332.34	268.62	341.54	401.09	169.20	22.50	210.04
UNITS OF EFFORT* PERFORMED	3.00	2.80	2.60	2.40	4.10	1.60	30.40

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-16

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION 8C

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.00	.00	.21
AMERICAN EEL	NS	.00	.00	.66	1.18	4.47
AMERICAN SHAD	NS	.00	.00	.00	.00	.00
ATLANTIC STURGEON	NS	.00	.36	.66	.29	.30
ATLANTIC TOMCOD	NS	20.80	.56	.83	37.37	229.03
BAY ANCHOVY	NS	.00	.00	.00	.00	.00
BLUEFISH	NS	.00	.00	.00	.00	.00
BROWN BULLHEAD	NS	.00	.36	.00	.00	.00
HOGCHOKER	NS	.00	2.86	60.60	129.76	20.65
RAINBOW SMELT	NS	.80	.00	.00	.00	2.71
SHORTNOSE STURGEON	NS	.00	.00	.28	.00	.00
SPOT	NS	.00	.00	.00	.00	.00
STRIPED BASS	NS	22.40	.00	.00	.00	.00
WEAKFISH	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.00	.00	.83	7.08	11.75
WHITE PERCH	NS	40.00	50.75	4.55	38.29	75.54
TOTAL SPECIES MONTHLY MEAN	NS	84.00	54.88	68.42	213.97	344.65
UNITS OF EFFORT* PERFORMED	.00	2.50	3.20	4.40	3.30	5.10

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-16 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS
AT STATION BC

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	.00	.00	.31	1.56	.00	.00	.19
AMERICAN EEL	9.50	.28	.36	5.94	1.50	.56	2.22
AMERICAN SHAD	.00	.33	.00	3.44	.00	.00	.34
ATLANTIC STURGEON	.00	.28	.00	.00	.00	.00	.17
ATLANTIC TOMCOD	262.00	2.50	.72	3.13	3.17	1.11	51.02
BAY ANCHOVY	12.33	5.56	9.55	3.75	.00	.00	2.84
BLUEFISH	.50	.61	.31	.00	.00	.00	.13
BROWN BULLHEAD	.00	.00	.00	.63	.00	.00	.09
HOGCHOKER	5.42	41.50	145.85	688.75	754.00	65.56	174.09
RAINBOW SMELT	3.17	.33	.00	15.63	.00	.00	2.06
SHORTNOSE STURGEON	.00	.00	.00	.00	.17	.00	.04
SPOT	5.50	42.17	141.38	36.88	6.04	.00	21.09
STRIPED BASS	.00	5.61	2.59	3.13	.21	.56	3.14
WEAKFISH	.25	5.17	25.85	.00	.00	.00	2.84
WHITE CATFISH	.00	2.33	1.34	3.44	4.25	3.33	3.12
WHITE PERCH	13.83	13.72	34.51	106.56	30.79	76.67	44.11
TOTAL SPECIES MONTHLY MEAN	312.50	120.39	362.77	872.82	800.13	147.78	307.48
UNITS OF EFFORT* PERFORMED	3.50	3.30	3.00	3.20	5.20	1.80	38.50

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-17

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS
AT STATION BP

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	NS	.00	.00	.CO	.00
AMERICAN SHAD	NS	NS	.00	.00	.CO	.00
ATLANTIC TOMCOD	NS	NS	.00	.00	.CO	.48
BAY ANCHOVY	NS	NS	.00	.00	.CO	.37
BLUEBACK HERRING	NS	NS	.00	.00	.CO	.37
GIZZARD SHAD	NS	NS	.63	.00	.00	.00
RAINBOW SMELT	NS	NS	.00	2.78	.CO	.00
SPOTTAIL SHINER	NS	NS	.00	.56	.CO	.00
STRIPED BASS	NS	NS	.00	.00	.CO	.00
WHITE CATFISH	NS	NS	.00	.00	.00	.00
WHITE PERCH	NS	NS	4.20	2.22	.CO	.00
TOTAL SPECIES MONTHLY MEAN	NS	NS	4.82	5.56	.CO	1.22
UNITS OF EFFORT* PERFORMED	.00	.00	1.50	1.80	1.50	2.50

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-17 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS
AT STATION BP

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	.00	1.25	.00	.00	8.52	.00	.98
AMERICAN SHAD	13.13	5.63	.00	.63	.00	.00	1.94
ATLANTIC TOMCOD	.00	.00	.00	.00	.00	.00	.05
BAY ANCHOVY	10.00	349.29	7.59	10.00	.00	.00	37.72
BLUEBACK HERRING	3.75	.63	.00	65.00	14.07	.00	8.38
GIZZARD SHAD	.00	.00	.00	.00	1.48	1.43	.35
RAINBOW SMELT	.00	.00	.00	.00	.00	2.86	.56
SPOTTAIL SHINER	.00	.00	.00	.00	.00	.00	.06
STRIPED BASS	.00	.00	.00	.00	.37	.00	.04
WHITE CATFISH	.00	.00	.00	.00	.00	1.43	.14
WHITE PERCH	.00	.00	.00	.00	.37	.00	.68
TOTAL SPECIES MONTHLY MEAN	26.88	356.79	7.59	75.63	24.81	5.72	50.90
UNITS OF EFFORT* PERFORMED	1.60	1.50	1.50	1.60	2.70	.70	16.90

ANNUAL VALUES ARE BASED ON 10 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-18

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS

BC BID COMBINED

SPECIES	MONTH JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.00	.00	.00
AMERICAN SHAD	NS	.00	.00	.00	.CO	.00
ATLANTIC TOMCOD	NS	.00	.00	.00	.32	.13
BAY ANCHOVY	NS	.00	.00	.00	.CO	.64
BLUEBACK HERRING	NS	.00	.00	.00	.CO	.00
BLUEFISH	NS	.00	.00	.00	.CO	.00
HOGCHOKER	NS	.00	.00	.00	.CO	.00
RAINBOW SMELT	NS	.00	.00	.00	.CO	.00
STRIPED BASS	NS	.00	.00	.00	.CO	.00
WEAKFISH	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.00	.00	.14	.CO	.00
WHITE PERCH	NS	.00	.53	1.59	.CO	.13
TOTAL SPECIES MONTHLY MEAN	NS	.00	.53	1.73	.32	.90
UNITS OF EFFORT* PERFORMED	.00	3.90	6.40	6.60	6.40	8.90

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-18 (CONTINUED)

ORANGE & ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SURFACE TRAWL COLLECTIONS

BC BID COMBINED

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	.18	.00	.00	.47	.19	.00	.08
AMERICAN SHAD	7.63	3.22	.00	2.05	.00	.00	1.17
ATLANTIC TOMCOD	.00	.00	.00	.00	.00	.00	.04
BAY ANCHOVY	10.19	77.40	50.50	1.88	.00	.00	12.78
BLUEBACK HERRING	41.58	2.17	3.33	4.86	3.41	.00	5.03
BLUEFISH	.16	.19	.00	.00	.00	.00	.03
HOGCHOKER	.00	.00	.67	.00	.00	.00	.06
RAINBOW SMELT	.16	.00	.00	.00	.09	1.18	.13
STRIPED BASS	.00	.00	.00	.00	.13	.00	.01
WEAKFISH	.00	.00	.16	.00	.00	.00	.01
WHITE CATFISH	.00	.00	.00	.00	.61	.00	.07
WHITE PERCH	.17	.00	.00	.00	.26	.50	.29
TOTAL SPECIES MONTHLY MEAN	60.07	82.99	54.66	9.26	4.68	1.68	19.71
UNITS OF EFFORT* PERFORMED	6.80	5.30	6.10	5.80	9.60	3.70	69.50

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-19
ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS

BOWLINE POND SEINES

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.13	.38	1.00	.00
AMERICAN EEL	NS	.00	.13	.13	.00	.42
AMERICAN SHAD	NS	.00	.00	.00	.00	.17
ATLANTIC MENHADEN	NS	.00	.00	.00	.00	.08
ATLANTIC NEEDLEFISH	NS	.00	.00	.00	.00	.00
ATLANTIC SILVERSIDE	NS	.00	.00	.00	.00	.00
ATLANTIC TOMCOD	NS	.50	.13	.00	.13	2.83
BANDED KILLIFISH	NS	2.00	3.13	4.63	3.00	3.17
BAY ANCHOVY	NS	.00	.00	.00	.00	2.00
BLUEBACK HERRING	NS	.00	.00	.00	2.88	3.67
BLUEFISH	NS	.00	.00	.00	.00	5.33
BLUEGILL	NS	.00	.13	.00	.38	.08
BROWN BULLHEAD	NS	.00	.00	.00	.00	.17
CARP	NS	.00	.13	.00	.13	.50
COMMON SHINER	NS	.00	.00	.00	.00	.00
GIZZARD SHAD	NS	.00	.25	.00	.00	.00
GOLDEN SHINER	NS	.00	1.50	.13	1.38	6.25
GOLDFISH	NS	.00	.38	.13	.13	.17
HOGCHOKER	NS	.00	.00	.00	.00	.00
LARGEMOUTH BASS	NS	.00	.00	.13	.00	.25
LEPOMIS SP	NS	.00	.13	.00	.00	.00
MUMMICHOG	NS	.00	.13	.00	.00	.08
NORTHERN PIPEFISH	NS	.00	.00	.00	.00	.00
PUMPKINSEED	NS	.00	4.00	2.50	6.88	16.58
RAINBOW SMELT	NS	.00	1.00	4.50	.63	.00
REDBREAST SUNFISH	NS	.00	2.88	1.88	6.63	13.08
ROUGH SILVERSIDE	NS	.00	.00	.00	.00	2.42
SPOT	NS	.00	.00	.00	.00	.00
SPOTTAIL SHINER	NS	.00	2.25	1.25	7.75	11.17
STRIPED BASS	NS	.00	.75	.13	.00	3.00
TESSELLATED DARTER	NS	.50	1.25	2.25	3.13	3.08
TIDEWATER SILVERSIDE	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.00	.00	.00	.00	.00
WHITE PERCH	NS	.50	1.63	.13	8.50	22.58
WHITE SUCKER	NS	.00	.00	.00	.00	.25
YELLOW PERCH	NS	.00	.13	.00	.00	.17
TOTAL SPECIES MONTHLY MEAN	NS	3.50	20.00	18.12	42.50	97.50
UNITS OF EFFORT* PERFORMED	.00	2.00	8.00	8.00	8.00	12.00

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS ONE SEINE HAUL

TABLE 7-19 (CONTINUED)
ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS

BOWLINE POND SEINES

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	4.38	.13	.00	.13	5.50	1.00	1.15
AMERICAN EEL	.00	.25	.00	.13	.17	.00	.11
AMERICAN SHAD	36.38	11.88	5.13	10.63	.00	.00	5.83
ATLANTIC MENHADEN	.00	.00	.00	.00	.00	.00	.01
ATLANTIC NEEDLEFISH	.38	.00	2.13	.00	.00	.00	.23
ATLANTIC SILVERSIDE	.25	1.75	3.63	.00	.00	.00	.51
ATLANTIC TOMCOD	.00	.00	.00	.00	.00	.00	.33
BANDED KILLIFISH	6.38	14.25	14.13	9.88	22.08	4.00	7.88
BAY ANCHOVY	.00	11.50	43.50	1.00	.58	.00	5.33
BLUEBACK HERRING	76.00	207.75	5.63	737.88	35.58	.00	97.22
BLUEFISH	8.25	2.25	.88	.00	.00	.00	1.52
BLUEGILL	.75	.25	.13	1.50	2.83	.00	.55
BROWN BULLHEAD	.13	.50	.00	.00	.00	.00	.07
CARP	.00	.00	.25	.38	.17	.00	.14
COMMON SHINER	.00	.00	.00	.00	.08	.00	.01
GIZZARD SHAD	.00	.00	.00	.25	5.33	13.00	1.71
GOLDEN SHINER	.38	.75	.25	.63	1.33	.00	1.14
GOLDFISH	.00	.13	.00	.00	.00	.00	.08
HOGCHOKER	.00	.13	.50	.38	.00	.00	.09
LARGEMOUTH BASS	.00	.38	.00	.13	.08	.00	.09
LEPOMIS SP	1.13	.00	.00	.00	.00	.00	.11
MUMMICHOG	.13	1.13	2.50	1.25	1.17	.25	.60
NORTHERN PIPEFISH	.13	1.50	.88	.00	.00	.00	.23
PUMPKINSEED	11.63	9.00	6.38	3.00	4.42	.00	5.85
RAINBOW SMELT	.00	.00	.00	.00	.00	.25	.58
REDBREAST SUNFISH	12.13	10.63	10.25	6.38	2.83	.00	6.06
ROUGH SILVERSIDE	.00	.13	1.50	.00	.00	.00	.37
SPOT	.00	1.13	.25	.00	.08	.00	.13
SPOTTAIL SHINER	16.63	7.50	5.50	4.63	3.25	.25	5.47
STRIPED BASS	15.63	13.25	8.25	2.88	3.83	.75	4.41
TESSELLATED DARTER	5.13	1.63	1.38	1.75	4.42	.25	2.25
TIDEWATER SILVERSIDE	.00	.00	.50	3.75	.00	.00	.39
WHITE CATFISH	.00	.50	.13	.00	.00	.00	.06
WHITE PERCH	21.13	20.88	12.38	2.38	24.50	.25	10.44
WHITE SUCKER	.00	.13	.00	.00	.08	.00	.04
YELLOW PERCH	.13	.50	.00	.13	.08	.00	.10
TOTAL SPECIES MONTHLY MEAN	217.00	319.75	126.00	789.00	118.41	20.00	161.07
UNITS OF EFFORT* PERFORMED	8.00	8.00	8.00	8.00	12.00	4.00	86.00

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS ONE SEINE HAUL

TABLE V-20

ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS

BOWLINE RIVER SEINES

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.13	.75	.17
AMERICAN EEL	NS	.00	.25	.13	.00	.17
AMERICAN SHAD	NS	.00	.00	.00	.00	.50
ATLANTIC MENHADEN	NS	.00	.00	.00	.00	.00
ATLANTIC NEEDLEFISH	NS	.00	.00	.00	.00	.00
ATLANTIC SILVERSIDE	NS	.00	.00	.00	.00	.00
ATLANTIC TOMCOD	NS	.00	.00	.00	.75	1.58
BANDED KILLIFISH	NS	.00	.13	.25	.00	.75
BAY ANCHOVY	NS	.00	.00	.00	.00	20.17
BLUEBACK HERRING	NS	.00	.00	.00	1.75	3.42
BLUEFISH	NS	.00	.00	.00	.00	4.17
BLUEGILL	NS	.00	.00	.00	.00	.00
CARP	NS	.00	.00	.38	.00	.08
CREVALLE JACK	NS	.00	.00	.00	.00	.00
FOURSPINE STICKLEBACK	NS	.00	.00	.00	.00	.00
GIZZARD SHAD	NS	.00	.00	.00	.00	.00
GOLDEN SHINER	NS	.00	.25	.25	.50	.08
GOLDFISH	NS	.00	.25	.00	.00	.08
HOGCHOKER	NS	.00	.00	.00	.13	.00
MUMMICHOG	NS	.00	.13	.00	.00	.00
NORTHERN PIPEFISH	NS	.00	.00	.00	.00	.00
PUMPKINSEED	NS	.00	12.13	.25	2.00	.75
RAINBOW SMELT	NS	.00	.25	.88	.25	.08
REDBREAST SUNFISH	NS	.00	1.75	.13	4.50	.33
ROUGH SILVERSIDE	NS	.00	.00	.00	.00	1.33
SPOT	NS	.00	.00	.00	.00	.00
SPOTTAIL SHINER	NS	.00	2.50	.75	2.38	8.08
STRIPED BASS	NS	.00	.13	.00	.00	4.83
STRIPED MULLET	NS	.00	.00	.00	.00	.00
TESSELLATED DARTER	NS	.25	.75	.75	.38	.42
TIDEWATER SILVERSIDE	NS	.00	.00	.00	.00	.00
WHITE CATFISH	NS	.00	.00	.00	.00	.08
WHITE PERCH	NS	.00	.13	.50	1.38	21.33
WHITE SUCKER	NS	.25	.00	.00	.25	.00
YELLOW PERCH	NS	.00	.00	.00	.25	.00
TOTAL SPECIES MONTHLY MEAN	NS	.50	18.62	4.37	15.25	68.41
UNITS OF EFFORT* PERFORMED	.00	4.00	8.00	8.00	8.00	12.00

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)

* A UNIT EFFORT IS DEFINED AS ONE SEINE HAUL

E038

TABLE V-20 (CONTINUED)
ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* SEINE COLLECTIONS

BOWLINE RIVER SEINES

SPECIES	MONTH						ANNUAL
	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ALEWIFE	.00	5.13	.00	.13	.CO	.00	.57
AMERICAN EEL	.00	.13	.00	.00	.CO	.00	.06
AMERICAN SHAD	16.25	17.13	5.63	11.63	.CO	.00	4.65
ATLANTIC MENHADEN	.13	.00	.00	.00	.CO	.00	.01
ATLANTIC NEEDLEFISH	.13	.00	.00	.00	.CO	.00	.01
ATLANTIC SILVERSIDE	.25	2.38	1.88	.00	.CO	.00	.41
ATLANTIC TOMCOD	.00	.13	.00	.00	.CO	.00	.22
BANDED KILLIFISH	.88	1.75	1.88	1.13	.17	.25	.65
BAY ANCHOVY	.00	54.88	9.25	.13	.CO	.00	7.67
BLUEBACK HERRING	4.75	3.38	5.88	84.88	4.17	.00	9.84
BLUEFISH	10.50	2.13	.38	.00	.00	.00	1.56
BLUEGILL	.00	.13	.00	.25	.08	.00	.04
CARP	.13	.25	.00	.00	.CO	.00	.08
CREVALLE JACK	.00	.13	.00	.00	.CO	.00	.01
FOURSPINE STICKLEBACK	.13	.00	.00	.00	.CC	.CO	.01
GIZZARD SHAD	.00	.00	.00	.00	1.75	.50	.20
GOLDEN SHINER	.00	.00	.00	.13	.CO	.00	.11
GOLDFISH	.00	.50	.00	.00	.00	.00	.08
HOGCHOKER	.00	.13	.00	.00	.CO	.00	.02
MUMMICHOG	.00	.13	.00	.00	.CO	.00	.02
NORTHERN PIPEFISH	.00	.63	.38	.00	.CO	.00	.09
PUMPKINSEED	.50	.00	.13	.75	.25	.00	1.52
RAINBOW SMELT	.00	.00	.00	.00	.CO	.00	.13
REDBREAST SUNFISH	1.50	.63	.63	.50	.25	.00	.93
ROUGH SILVERSIDE	.13	.00	1.13	.00	.CO	.00	.23
SPOT	.00	2.63	.50	.00	.CO	.00	.28
SPOTTAIL SHINER	5.88	4.13	1.00	3.63	.50	.50	2.67
STRIPED BASS	18.38	27.88	19.00	10.38	3.58	.75	7.72
STRIPED MULLET	.00	.00	.25	.CO	.CO	.00	.02
TESSELLATED DARTER	.38	.25	.00	.00	.CO	.00	.29
TIDEWATER SILVERSIDE	.00	.00	.00	.00	.08	.00	.01
WHITE CATFISH	.00	.38	.00	.00	.08	.00	.05
WHITE PERCH	20.88	28.13	2.25	1.63	.50	.00	6.97
WHITE SUCKER	.00	.00	.13	.CO	.CO	.00	.06
YELLOW PERCH	.00	.50	.00	.00	.CO	.00	.07
TOTAL SPECIES MONTHLY MEAN	80.75	153.37	50.25	115.12	11.41	2.00	47.28
UNITS OF EFFORT* PERFORMED	8.00	8.00	8.00	8.00	12.CO	4.00	88.00

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS ONE SEINE HAUL

the Bowline area (Table V-21). Spot, a marine migrant, was common in the Haverstraw Bay area during August and September, which are periods of high salt water intrusion. Striped bass abundance was highest in the Bowline Bay area during July and August.

The greatest average abundances in bottom trawls were attained in July (446.0 fish/effort), corresponding to recruitment of juvenile Atlantic tomcod and striped bass into the Bowline vicinity, and during October (508.8 fish/effort) and November (410.6 fish/effort), corresponding to fall movements of white perch and hogchoker (Table V-21).

Fluctuations in the nearshore community structure resulted from the movement of white perch, striped bass, American shad, spottail shiner, banded killifish, blueback herring, and bay anchovy into and out of the shallow areas. White perch were most common throughout the summer and November, while striped bass and American shad juveniles utilized the Bowline Point shoal vicinity during late summer. Spottail shiner were common throughout the summer; banded killifish, found primarily in Bowline Pond, occurred in abundance only during November. Both blueback herring and bay anchovy showed different periods of peak abundance between the Bowline Pond and river seines. Blueback herring were abundant in the pond during August and October while only the latter peak was reflected in the river seines. Bay anchovy were common during June and August in the river seines, but did not move into the pond until September (Tables V-19 and V-20).

TABLE V-21

ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

SPECIES	MONTH					
	JAN	FEB	MAR	APR	MAY	JUN
ALEWIFE	NS	.00	.00	.00	1.43	1.18
AMERICAN EEL	NS	.00	.12	1.29	2.10	2.16
AMERICAN SHAD	NS	.00	.00	.00	.C0	.00
ATLANTIC MENHADEN	NS	.00	.00	.00	.C0	.09
ATLANTIC STURGEON	NS	.00	.12	.35	.10	.10
ATLANTIC TOMCOD	NS	20.66	4.11	5.93	37.01	195.93
BAY ANCHOVY	NS	.00	.00	.00	.C0	.95
BLUEBACK HERRING	NS	.00	.00	.00	.C0	.14
BLUEFISH	NS	.00	.00	.00	.C0	.16
BROWN BULLHEAD	NS	.00	.30	1.63	.43	.28
CARP	NS	.00	.00	.00	.C0	.32
FOURSPINE STICKLEBACK	NS	.00	.00	.28	.00	.00
GIZZARD SHAD	NS	.00	.00	.00	.C0	.00
GOLDFISH	NS	.00	.19	.00	.C0	.42
HOGCHOKER	NS	.28	2.40	33.20	59.96	18.64
PUMPKINSEED	NS	.00	.00	.71	2.1C	.56
RAINBOW SMELT	NS	4.08	.36	.00	.57	1.68
SHORTNOSE STURGEON	NS	.00	.00	.09	.C0	.00
SPOT	NS	.00	.00	.00	.00	.00
SPOTTAIL SHINER	NS	.00	.37	1.43	3.C0	.00
STRIPED BASS	NS	24.09	.95	.24	2.71	11.96
SUMMER FLOUNDER	NS	.00	.00	.00	.C0	.00
TESSELLATED DARTER	NS	3.97	1.97	.11	.C0	.00
WEAKFISH	NS	.00	.00	.00	.C0	.00
WHITE BASS	NS	.00	.00	.00	.C0	.00
WHITE CATFISH	NS	.28	.43	1.94	3.69	5.40
WHITE PERCH	NS	27.62	34.05	51.51	69.82	91.17
WHITE SUCKER	NS	.00	.00	.28	.57	.00
YELLOW PERCH	NS	.00	.48	.00	.24	.14
TOTAL SPECIES MONTHLY MEAN	NS	80.97	45.84	98.98	183.72	331.25
UNITS OF EFFORT* PERFORMED	.00	4.40	7.50	8.50	8.C0	11.10

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)

* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

TABLE V-21 (CONTINUED)
ORANGE & ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

MONTHLY MEAN CATCH PER EFFORT* BOTTOM TRAWL COLLECTIONS

BOWLINE VICINITY BOT. TRAWLS

SPECIES	MONTH JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN
ALEWIFE	9.34	.31	.10	1.71	.42	.00	1.32
AMERICAN EEL	3.50	.33	.63	5.91	4.03	.19	1.84
AMERICAN SHAD	19.11	.30	.00	1.30	.14	.00	1.89
ATLANTIC MENHADEN	.00	.00	.00	.00	.00	.00	.01
ATLANTIC STURGEON	.00	.09	.00	.00	.00	.00	.07
ATLANTIC TOMCOD	134.45	3.91	1.65	5.54	8.95	2.66	38.25
BAY ANCHOVY	41.33	4.88	4.74	1.25	.00	.00	4.83
BLUEBACK HERRING	.74	.00	.00	.63	.14	.00	.15
BLUEFISH	1.07	.91	.65	.00	.00	.00	.25
BROWN BULLHEAD	.11	.13	.00	1.44	.57	.00	.44
CARP	.00	.11	.26	.00	.00	.00	.06
FOURSPINE STICKLEBACK	.00	.00	.00	.00	.00	.00	.03
GIZZARD SHAD	.00	.00	.00	.00	.00	.48	.04
GOLDFISH	.61	.00	.00	.00	.56	.00	.16
HOGCHOKER	6.30	37.76	86.05	289.80	279.41	23.10	76.08
PUMPKINSEED	.37	.00	.42	5.42	.35	.00	.90
RAINBOW SMELT	2.72	.11	.00	5.72	.00	.00	1.38
SHORTNOSE STURGEON	.00	.00	.00	.00	.06	.00	.01
SPOT	10.15	130.43	107.48	23.37	6.33	.00	25.25
SPOTTAIL SHINER	.00	.00	.00	1.46	1.17	3.81	1.02
STRIPED BASS	147.14	45.02	9.12	12.33	4.70	3.73	23.82
SUMMER FLOUNDER	.00	.21	.00	.00	.00	.00	.02
TESSELLATED DARTER	.00	.00	.00	.00	.00	.48	.59
WEAKFISH	.08	3.72	9.13	.00	.00	.00	1.18
WHITE BASS	.00	.00	.00	.00	.19	.00	.02
WHITE CATFISH	.45	2.91	12.79	6.49	4.54	1.53	3.68
WHITE PERCH	68.35	31.66	46.76	146.03	98.75	29.16	63.17
WHITE SUCKER	.00	.00	.00	.00	.00	1.16	.18
YELLOW PERCH	.19	.00	.00	.42	.32	.00	.16
TOTAL SPECIES MONTHLY MEAN	446.00	262.79	279.77	508.80	410.61	66.28	246.82
UNITS OF EFFORT* PERFORMED	8.10	7.80	7.20	7.20	11.40	4.10	85.30

ANNUAL VALUES ARE BASED ON 11 SAMPLED MONTHS (NS - NOT SAMPLED)
* A UNIT EFFORT IS DEFINED AS 10 MINUTES OF TRAWLING

e. Length Distribution

(i) White Perch

Collections of white perch in the Bowline vicinity, indicated that the overwintering young-of-the-year white perch (now yearlings) were predominantly 5-8 cm throughout the early spring (Table V-22). Recruitment of the first 1977 juveniles occurred in the nearshore waters of Bowline Pond in July, when perch were about 2-5 cm and continued through December, when they were 6-9 cm in length (Table V-23).

(ii) Striped bass

From February through June, collections of striped bass were composed primarily of yearlings, although some older fish were present in February and May (Table V-24). From June on, collections were dominated by juvenile fish which grew from 1-4 cm in June to approximately 6-8 cm in November. The data indicate that most of these juvenile striped bass were collected either in the shallow water trawls at BB (Table V-14) or in the river seines (Table V-20).

(iii) Atlantic Tomcod

Collections from February through May showed the presence of yearling tomcod, which generally decreased in abundance during this post-spawning period (Table V-25). Young-of-the-year fish first appeared in May collections at lengths of 2-6 cm and showed an expected growth pattern to maturity (11-15 cm) within their first year. Unlike the striped bass and white perch, the Atlantic tomcod juveniles preferred the deeper trawl stations BC (Table V-16) and BID (Table V-15),

TABLE V-22

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	1	.7	0	.0	0	.0	0	.0	2	.2
5.1- 6.0	0	.0	6	4.3	6	2.4	1	.4	14	3.4	4	.4
6.1- 7.0	0	.0	30	21.3	39	15.4	4	1.6	59	14.1	68	7.0
7.1- 8.0	0	.0	6	4.3	31	12.3	12	4.7	18	4.3	155	16.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	102	10.5
9.1- 10.0	0	.0	0	.0	1	.4	3	1.2	3	.7	14	1.4
10.1- 11.0	0	.0	2	1.4	23	9.1	39	15.2	31	7.4	22	2.3
11.1- 12.0	0	.0	1	.7	32	12.6	50	19.5	65	15.6	62	6.4
12.1- 13.0	0	.0	2	1.4	32	12.6	39	15.2	40	9.6	69	7.1
13.1- 14.0	0	.0	3	2.1	17	6.7	28	10.9	17	4.1	60	6.2
14.1- 15.0	0	.0	7	5.0	13	5.1	29	11.3	17	4.1	47	4.8
15.1- 16.0	0	.0	19	13.5	17	6.7	20	7.8	20	4.8	61	6.3
16.1- 17.0	0	.0	16	11.3	12	4.7	14	5.5	39	9.4	82	8.5
17.1- 18.0	0	.0	21	14.9	10	4.0	11	4.3	33	7.9	77	7.9
18.1- 19.0	0	.0	11	7.8	5	2.0	5	2.0	34	8.2	71	7.3
19.1- 20.0	0	.0	10	7.1	11	4.3	0	.0	13	3.1	41	4.2
20.1- 21.0	0	.0	4	2.8	3	1.2	1	.4	7	1.7	18	1.9
21.1- 22.0	0	.0	1	.7	1	.4	0	.0	4	1.0	7	.7
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	2	.5	3	.3
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	4	.4
24.1- 25.0	0	.0	1	.7	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.1
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	1	.2	0	.0
TOTAL ANALYZED	0		141		253		256		417		970	
MEAN LENGTH			13.7		11.8		12.9		13.0		12.8	
VARIANCE			26.73		15.89		6.80		19.56		20.32	

TABLE V-22 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	1	.2	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	63	11.5	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	42	7.7	9	1.8	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	26	4.8	65	12.7	5	1.4	1	.2	3	.5	0	.0
5.1- 6.0	2	.4	84	16.4	39	11.2	18	4.1	35	5.5	2	1.7
6.1- 7.0	1	.2	9	1.8	25	7.2	66	14.9	90	14.0	6	5.1
7.1- 8.0	10	1.8	0	.0	3	.9	55	12.4	120	18.7	22	18.8
8.1- 9.0	46	8.4	1	.2	1	.3	13	2.9	67	10.5	12	10.3
9.1- 10.0	82	15.0	11	2.1	4	1.2	3	.7	8	1.2	0	.0
10.1- 11.0	40	7.3	24	4.7	8	2.3	13	2.9	20	3.1	6	5.1
11.1- 12.0	14	2.6	37	7.2	16	4.6	40	9.0	46	7.2	16	13.7
12.1- 13.0	32	5.9	14	2.7	11	3.2	34	7.7	38	5.9	15	12.8
13.1- 14.0	64	11.7	58	11.3	40	11.5	44	10.0	53	8.3	14	12.0
14.1- 15.0	31	5.7	87	17.0	66	19.0	74	16.7	69	10.8	13	11.1
15.1- 16.0	37	6.8	43	8.4	58	16.7	38	8.6	41	6.4	6	5.1
16.1- 17.0	26	4.8	32	6.2	41	11.8	21	4.8	29	4.5	1	.9
17.1- 18.0	13	2.4	26	5.1	21	6.1	12	2.7	11	1.7	2	1.7
18.1- 19.0	14	2.6	6	1.2	4	1.2	3	.7	6	.9	1	.9
19.1- 20.0	1	.2	6	1.2	3	.9	5	1.1	2	.3	0	.0
20.1- 21.0	1	.2	1	.2	1	.3	2	.5	3	.5	1	.9
21.1- 22.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	546		513		347		442		641		117	
MEAN LENGTH	10.1		11.3		13.0		11.6		10.6		11.2	
VARIANCE	22.12		21.69		16.27		14.46		13.99		10.14	

TABLE V-23

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION - ALL - SEINE - POND

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.5
5.1- 6.0	0	.0	0	.0	2	15.4	0	.0	12	17.6	1	.5
6.1- 7.0	0	.0	0	.0	5	38.5	0	.0	43	63.2	39	20.1
7.1- 8.0	0	.0	0	.0	1	7.7	0	.0	5	7.4	55	28.4
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	24	12.4
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	1.5
10.1- 11.0	0	.0	0	.0	1	7.7	1	100.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	1	1.5	3	1.5
12.1- 13.0	0	.0	0	.0	1	7.7	0	.0	0	.0	8	4.1
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	16	8.2
14.1- 15.0	0	.0	0	.0	1	7.7	0	.0	0	.0	7	3.6
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	1	1.5	9	4.6
16.1- 17.0	0	.0	0	.0	1	7.7	0	.0	2	2.9	7	3.6
17.1- 18.0	0	.0	1	100.0	0	.0	0	.0	1	1.5	10	5.2
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	1	1.5	6	3.1
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	2	2.9	5	2.6
20.1- 21.0	0	.0	0	.0	1	7.7	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		1		13		1		68		194	
MEAN LENGTH			17.7		9.9		10.7		7.7		10.3	
VARIANCE					22.94				12.08		17.06	

TABLE V-23 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION - ALL - SEINE - POND

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	33	19.5	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	16	9.5	4	2.8	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	17	10.1	45	31.0	5	5.1	1	5.3	3	1.9	0	.0
5.1- 6.0	1	.6	44	30.3	32	32.3	6	31.6	31	19.7	0	.0
6.1- 7.0	1	.6	4	2.8	19	19.2	8	42.1	53	33.8	1	100.0
7.1- 8.0	8	4.7	0	.0	2	2.0	0	.0	45	28.7	0	.0
8.1- 9.0	29	17.2	1	.7	1	1.0	0	.0	18	11.5	0	.0
9.1- 10.0	19	11.2	5	3.4	3	3.0	1	5.3	1	.6	0	.0
10.1- 11.0	5	3.0	1	.7	6	6.1	1	5.3	1	.6	0	.0
11.1- 12.0	1	.6	4	2.8	6	6.1	0	.0	1	.6	0	.0
12.1- 13.0	5	3.0	2	1.4	4	4.0	0	.0	1	.6	0	.0
13.1- 14.0	13	7.7	8	5.5	5	5.1	0	.0	0	.0	0	.0
14.1- 15.0	4	2.4	7	4.8	5	5.1	1	5.3	0	.0	0	.0
15.1- 16.0	9	5.3	10	6.9	5	5.1	0	.0	1	.6	0	.0
16.1- 17.0	2	1.2	3	2.1	1	1.0	0	.0	0	.0	0	.0
17.1- 18.0	3	1.8	2	1.4	1	1.0	1	5.3	1	.6	0	.0
18.1- 19.0	3	1.8	2	1.4	1	1.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	2	1.4	2	2.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	1	.7	0	.0	0	.0	1	.6	0	.0
21.1- 22.0	0	.0	0	.0	1	1.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	169		145		99		19		157		1	
MEAN LENGTH	8.1		8.1		9.0		7.6		7.2		7.0	
VARIANCE	20.90		21.54		18.14		10.90		3.64			

TABLE V-24

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF STRIPED BASS
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	15	8.5
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	63	35.8
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	57	32.4
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	5	4.6	3	23.1	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	3	2.8	4	30.8	0	.0	0	.0	2	1.1
9.1- 10.0	0	.0	7	6.5	1	7.7	0	.0	0	.0	6	3.4
10.1- 11.0	0	.0	1	.9	1	7.7	0	.0	0	.0	5	2.8
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	1.1
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	5	2.8
13.1- 14.0	0	.0	1	.9	0	.0	0	.0	0	.0	2	1.1
14.1- 15.0	0	.0	7	6.5	0	.0	1	50.0	0	.0	2	1.1
15.1- 16.0	0	.0	9	8.3	2	15.4	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	6	5.6	0	.0	0	.0	0	.0	4	2.3
17.1- 18.0	0	.0	7	6.5	0	.0	0	.0	0	.0	5	2.8
18.1- 19.0	0	.0	6	5.6	0	.0	0	.0	1	9.1	2	1.1
19.1- 20.0	0	.0	10	9.3	0	.0	0	.0	2	18.2	0	.0
20.1- 21.0	0	.0	5	4.6	1	7.7	1	50.0	2	18.2	1	.6
21.1- 22.0	0	.0	5	4.6	0	.0	0	.0	0	.0	1	.6
22.1- 23.0	0	.0	6	5.6	0	.0	0	.0	1	9.1	0	.0
23.1- 24.0	0	.0	4	3.7	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	3	2.8	0	.0	0	.0	0	.0	2	1.1
25.1- 26.0	0	.0	2	1.9	0	.0	0	.0	1	9.1	1	.6
26.1- 27.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	5	4.6	0	.0	0	.0	1	9.1	1	.6
28.1- 29.0	0	.0	2	1.9	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	4	3.7	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	2	1.9	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	1	7.7	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	0	.0	0	.0	0	.0	2	18.2	0	.0
35.1- 36.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	2	1.9	0	.0	0	.0	1	9.1	0	.0
38.1- 39.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE V-24 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF STRIPED BASS
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
42.1- 43.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
44.1- 45.0	0	.0	1	.9	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		108		13		2		11		176	
MEAN LENGTH			20.0		12.5		17.7		25.7		5.6	
VARIANCE			60.07		58.18		16.29		50.67		31.53	

TABLE V-24 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF STRIPED BASS
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	72	18.2	1	.2	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	144	36.5	4	.9	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	104	26.3	64	14.9	9	3.9	0	.0	0	.0	0	.0
5.1- 6.0	52	13.2	206	47.9	87	37.5	30	17.5	19	15.4	0	.0
6.1- 7.0	17	4.3	102	23.7	91	39.2	62	36.3	42	34.1	5	33.3
7.1- 8.0	4	1.0	37	8.6	32	13.8	42	24.6	31	25.2	8	53.3
8.1- 9.0	0	.0	13	3.0	8	3.4	15	8.8	17	13.8	2	13.3
9.1- 10.0	0	.0	2	.5	4	1.7	13	7.6	3	2.4	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	5	2.9	4	3.3	0	.0
11.1- 12.0	1	.3	0	.0	1	.4	1	.6	1	.8	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	1	.8	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	2	1.6	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	1	.6	1	.8	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	1	.6	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	1	.6	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	1	.2	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	2	1.6	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
35.1- 36.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
38.1- 39.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	1	.3	0	.0	0	.0	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE V-24 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF STRIPED BASS
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL NO.	JUL PCNT	AUG NO.	AUG PCNT	SEP NO.	SEP PCNT	OCT NO.	OCT PCNT	NOV NO.	NOV PCNT	DEC NO.	DEC PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
42.1- 43.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
44.1- 45.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	395		430		232		171		123		15	
MEAN LENGTH	4.1		5.9		6.4		7.4		7.7		7.5	
VARIANCE	4.48		1.69		1.04		3.30		9.37		.52	

TABLE V-25

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	24	10.2	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	93	39.4	3	.5
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	87	36.9	123	20.1
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	8	3.4	162	26.5
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	154	25.2
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	132	21.6
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	32	5.2
9.1- 10.0	0	.0	0	.0	1	2.9	0	.0	0	.0	3	.5
10.1- 11.0	0	.0	6	5.9	2	5.7	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	6	5.9	5	14.3	1	2.1	0	.0	0	.0
12.1- 13.0	0	.0	25	24.8	9	25.7	17	36.2	2	.8	0	.0
13.1- 14.0	0	.0	29	28.7	8	22.9	15	31.9	3	1.3	0	.0
14.1- 15.0	0	.0	12	11.9	6	17.1	10	21.3	13	5.5	0	.0
15.1- 16.0	0	.0	12	11.9	3	8.6	2	4.3	4	1.7	1	.2
16.1- 17.0	0	.0	7	6.9	0	.0	2	4.3	1	.4	0	.0
17.1- 18.0	0	.0	2	2.0	0	.0	0	.0	1	.4	1	.2
18.1- 19.0	0	.0	2	2.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	1	2.9	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		101		35		47		236		611	
MEAN LENGTH			13.7		13.4		13.7		5.0		6.2	
VARIANCE			2.91		4.94		1.31		10.93		1.72	

TABLE V-25 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	1	2.3	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	3	1.0	1	2.9	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	47	15.5	4	11.4	5	38.5	0	.0	0	.0	0	.0
7.1- 8.0	87	28.6	7	20.0	3	23.1	5	11.4	1	.9	0	.0
8.1- 9.0	75	24.7	6	17.1	3	23.1	8	18.2	1	.9	0	.0
9.1- 10.0	59	19.4	5	14.3	0	.0	11	25.0	3	2.8	0	.0
10.1- 11.0	9	3.0	3	8.6	1	7.7	11	25.0	15	14.2	0	.0
11.1- 12.0	3	1.0	1	2.9	0	.0	3	6.8	24	22.6	1	8.3
12.1- 13.0	0	.0	0	.0	1	7.7	2	4.5	17	16.0	1	8.3
13.1- 14.0	1	.3	0	.0	0	.0	0	.0	13	12.3	4	33.3
14.1- 15.0	5	1.6	0	.0	0	.0	2	4.5	16	15.1	1	8.3
15.1- 16.0	2	.7	2	5.7	0	.0	0	.0	6	5.7	0	.0
16.1- 17.0	4	1.3	1	2.9	0	.0	1	2.3	3	2.8	0	.0
17.1- 18.0	2	.7	4	11.4	0	.0	0	.0	4	3.8	3	25.0
18.1- 19.0	2	.7	0	.0	0	.0	0	.0	1	.9	0	.0
19.1- 20.0	3	1.0	0	.0	0	.0	0	.0	0	.0	1	8.3
20.1- 21.0	1	.3	1	2.9	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	1	.9	1	8.3
22.1- 23.0	1	.3	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	1	.9	0	.0
TOTAL ANALYZED	304		35		13		44		106		12	
MEAN LENGTH	8.8		10.4		8.0		10.0		13.0		15.6	
VARIANCE	6.63		16.37		3.18		4.42		6.70		9.96	

and were seldom collected at BB (Table V-14) and the near-shore habitat (Table V-19 and V-20).

(iv) Blueback Herring

The first collection of blueback herring in 1977 occurred in May when the population consisted primarily of yearling fish between 8 and 12 cm. Recruitment of the first juveniles into the collections occurred in June at 2-4 cm. Young blueback herring were most abundant in the Bowline area during the fall when most individuals were 4-7 cm in length (Table V-26).

(v) Alewife

The alewife population followed the same growth pattern exhibited by blueback herring, although the alewife were characteristically larger throughout their first year of development (Table V-27). Recruitment of first juveniles occurred during July when most juveniles were 4-6 cm; young-of-the-year alewife were 5-9 cm in length by November.

(vi) Bay Anchovy

Bay anchovy adults were collected during June and July at 4-10 cm, while the juvenile population, first present in August, matured from a range of 2-4 cm at that time, to 3-8 cm by October (Table V-28).

2. Multi-Year (1971-1977) Trends

The identification of trends within fish populations, and the determination of whether these trends are natural or man-induced,

TABLE V-20

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF BLUEBACK HERRING
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	1.2
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	16	18.6
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	3	8.3	1	1.2
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	17	47.2	6	7.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	10	27.8	31	36.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	5	13.9	18	20.9
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	7	8.1
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	6	7.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	1	2.8	0	.0
TOTAL ANALYZED	0		0		0		0		36		86	
MEAN LENGTH									10.5		9.7	
VARIANCE									6.18		10.33	

TABLE V-26 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF BLUEBACK HERRING
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	26	18.6	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	111	79.3	68	53.1	1	1.1	13	4.0	52	22.4	0	.0
5.1- 6.0	3	2.1	59	46.1	88	96.7	212	65.6	151	65.1	0	.0
6.1- 7.0	0	.0	1	.8	2	2.2	96	29.7	29	12.5	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	1	.3	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	1	.3	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	140		128		91		323		232		0	
MEAN LENGTH	4.3		5.1		5.5		5.9		5.4			
VARIANCE	.11		.06		.06		.48		.25			

TABLE V-27

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF ALEWIFE
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	18.2
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	1	5.3	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	1	5.3	2	18.2
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	3	15.8	2	18.2
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	1	5.3	4	36.4
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	9.1
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	1	5.3	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	3	15.8	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	2	10.5	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	1	5.3	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	4	21.1	0	.0
30.1- 31.0	0	.0	0	.0	1	100.0	2	50.0	2	10.5	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	2	50.0	0	.0	0	.0
TOTAL ANALYZED	0		0		1		4		19		11	
MEAN LENGTH					31.0		31.2		22.8		12.6	
VARIANCE							.30		62.61		3.09	

TABLE V-27 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF ALEWIFE
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	31	36.5	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	52	61.2	24	54.5	0	.0	3	23.1	8	11.6	0	.0
6.1- 7.0	0	.0	19	43.2	1	100.0	6	46.2	30	43.5	3	75.0
7.1- 8.0	1	1.2	0	.0	0	.0	4	30.8	25	36.2	1	25.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	6	8.7	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	1	1.2	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	1	2.3	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	85		44		1		13		69		4	
MEAN LENGTH	5.2		6.3		6.6		6.7		7.0		7.0	
VARIANCE	.86		3.31				.49		.54		.01	

TABLE T-23

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF BAY ANCHOVY
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	1.6
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	59	30.6
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	63	32.6
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	42	21.8
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	23	11.9
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	1.6
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		0		0		0		0		193	
MEAN LENGTH											6.7	
VARIANCE											1.16	

TABLE V-23 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF BAY ANCHOVY
AT STATION - ALL - ALL GEARS

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	13	5.2	2	.8	0	.0	0	.0	0	.0
2.1- 3.0	66	40.5	28	11.2	78	29.3	0	.0	0	.0	0	.0
3.1- 4.0	33	20.2	113	45.2	132	49.6	2	10.5	3	42.9	0	.0
4.1- 5.0	1	.6	78	31.2	28	10.5	10	52.6	4	57.1	0	.0
5.1- 6.0	1	.6	2	.8	2	.8	5	26.3	0	.0	0	.0
6.1- 7.0	3	1.8	2	.8	5	1.9	1	5.3	0	.0	0	.0
7.1- 8.0	21	12.9	7	2.8	13	4.9	1	5.3	0	.0	0	.0
8.1- 9.0	32	19.6	7	2.8	6	2.3	0	.0	0	.0	0	.0
9.1- 10.0	5	3.1	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	1	.6	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	163		250		266		19		7		0	
MEAN LENGTH	5.0		4.0		3.7		5.0		4.1			
VARIANCE	7.30		1.65		2.08		.84		.15			

are difficult to accomplish even if suitable data from several annual cycles are available. Determination of whether observed trends are closely associated with or perhaps caused by cropping mortality at power plant intakes is an aspect integral to this study. However, because the center of abundance for many estuarine fish populations tends to shift upstream or downstream in relation to salt front movements, abundance data collected at a single kilometer point on the Hudson River should be interpreted with caution. In other words, factors such as river flow, rainfall, and/or salinity should be recognized, at least in a qualitative sense, when evaluating the meaning of annual abundance trends in the vicinity of Bowline.

Because long-term sampling programs are often characterized by unequal sampling effort between stations, seasons, and years, abundance comparisons based upon gross numbers of fish collected often reflect the fishing effort involved, and do not portray real changes in abundance. In order to reduce variability caused by unevenness in sampling effort, actual numbers of fish collected should be converted to catch-per-unit-effort values. Therefore the abundance values used in this section for comparisons among locations, seasons, and years are, where feasible, gear-specific catch-per-unit-effort (C/f) values derived for those stations and collection methods common to all sampling years.

Annual fluctuations in the percent composition of the total catch were also used to provide some information on population changes between years. However, this parameter was measured on the basis of all stations and all collection gear used over the seven sampling years at Bowline Point, and therefore fluctuations in species composition may not be totally independent of inequalities in annual sampling effort, and, in fact, may reflect an increased sampling effort directed to the shoreline habitat.

a. Total Species Composition

The total annual abundance and percent composition of fish species collected during 1971-1977 in the Bowline vicinity are shown in Table V-29, and an inventory of the 55 species collected over that period is presented in Table V-30.

The greatest number of species was collected during 1977 and 1975 while the least was collected during 1971. The low number of species collected during 1971, relative to other sampling years, may have resulted from a generally lower level of sampling effort during that year. This was primarily a result of the inaccessibility of Bowline Pond to boats during most of the sampling year, since the inlet was not dredged until early fall. However, even when such sampling variables as differences in collection gear, collection time (day vs. night), collection months, and sampling stations are eliminated between sampling years, the data still show that the least number of fish species was collected at Bowline during 1971.

The total number of species collected at Bowline, based on only day samples from common sampling months (May, June, August-December), common sampling stations (BB, BID, BC), and a common sampling method (bottom trawl), are as follows:

Year	1971	1972	1973	1974	1975	1976	1977
Number of Species	20	29	25	24	28	28	28

This comparison suggests that the ecological well-being of the Hudson River in the Bowline vicinity, as represented by the number of fish species encountered, is independent of the operation of the Bowline Point Generating Station.

TABLE V-29

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SUMMARY OF ABUNDANCES AND PERCENT COMPOSITION OF FISH
IN RIVER AND POND COLLECTIONS FOR ALL GEARS AND STATIONS

BOWLINE VICINITY - 1971-1977

Species-Rank	1977		1976		1975		1974		1973		1972		1971	
Order for 1977	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Blueback herring	10095	22.38	2830	7.73	2638	5.64	988	2.83	13768	20.97	3403	8.38	1432	8.68
Hogchoker	9342	20.71	8780	23.97	10610	22.70	5446	15.60	3425	5.22	4945	12.18	412	2.50
White perch	7035	15.59	9842	26.87	13539	28.96	5896	16.89	9924	15.11	11617	28.61	6822	41.34
Atlantic tomcod	4347	9.64	2841	7.76	3095	6.62	13161	37.70	5287	8.05	5945	14.64	629	3.81
Bay anchovy	2947	6.53	746	2.04	5695	12.18	2518	7.21	23560	35.88	10519	25.91	654	3.96
Striped bass	2442	5.41	1135	3.10	3264	6.98	1623	4.65	2424	3.69	1503	3.70	3811	23.09
Spot	1999	4.43	1415	3.86	0	0.00	0	0.00	149	0.23	0	0.00	0	0.00
American shad	1142	2.53	2057	5.62	728	1.56	318	0.91	468	0.71	176	0.43	200	1.21
Spottail shiner	848	1.88	1241	3.39	845	1.81	693	1.99	1047	1.59	841	2.07	352	2.13
Banded killifish	826	1.83	1004	2.74	1025	2.19	986	2.82	47	0.07	88	0.22	133	0.81
Pumpkinseed	785	1.74	739	2.02	1026	2.19	511	1.46	174	0.26	97	0.24	46	0.28
Redbreast sunfish	681	1.51	938	2.56	1152	2.46	406	1.16	107	0.16	21	0.05	47	0.28
White catfish	403	0.89	792	2.16	105	0.22	93	0.27	57	0.09	22	0.05	13	0.08
Bluefish	329	0.73	220	0.60	180	0.39	108	0.31	226	0.34	33	0.08	0	0.00
Alewife	282	0.63	259	0.71	569	1.22	1202	3.44	3650	5.56	523	1.29	1513	9.17
Tessellated darter	273	0.61	350	0.96	532	1.14	247	0.71	131	0.20	124	0.31	1	0.01
American eel	216	0.48	290	0.79	301	0.64	165	0.47	297	0.45	192	0.47	51	0.31
Rainbow smelt	186	0.41	83	0.23	279	0.60	71	0.20	75	0.11	59	0.15	52	0.32
Gizzard shad	150	0.33	65	0.18	90	0.19	1	0.00	0	0.00	0	0.00	0	0.00
Golden shiner	141	0.31	264	0.72	163	0.35	90	0.26	142	0.22	89	0.22	32	0.19
Weakfish	118	0.26	34	0.09	308	0.66	53	0.15	306	0.47	35	0.09	12	0.07
Atlantic silverside	81	0.18	1	0.00	19	0.04	52	0.15	22	0.03	100	0.25	39	0.24
Rough silverside	68	0.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Bluegill	64	0.14	101	0.28	130	0.28	27	0.08	53	0.08	19	0.05	2	0.01
Mummichog	59	0.13	19	0.05	87	0.19	137	0.39	23	0.04	3	0.01	52	0.32
Tidewater silverside	35	0.08	44	0.12	78	0.17	0	0.00	0	0.00	1	0.00	63	0.38
Brown bullhead	34	0.08	35	0.10	54	0.12	49	0.14	121	0.18	44	0.11	7	0.04
Northern pipefish	28	0.06	3	0.01	3	0.01	0	0.00	2	0.00	1	0.00	0	0.00
Carp	27	0.06	22	0.06	11	0.02	11	0.03	6	0.01	10	0.02	3	0.02
Goldfish	25	0.06	13	0.04	15	0.03	9	0.03	16	0.02	10	0.02	0	0.00
Yellow perch	25	0.06	15	0.04	28	0.06	5	0.01	15	0.02	15	0.04	5	0.03
Atlantic needlefish	21	0.05	1	0.00	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00
White sucker	16	0.04	20	0.05	19	0.04	5	0.01	8	0.01	4	0.01	0	0.00
UID Lepomis*	10	0.02	166	0.45	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00
Atlantic sturgeon	9	0.02	14	0.04	41	0.09	8	0.02	47	0.07	86	0.21	21	0.13

TABLE V-29 (Continued)

SUMMARY OF ABUNDANCES AND PERCENT COMPOSITION OF FISH
IN RIVER AND POND COLLECTIONS FOR ALL GEARS AND STATIONS

Species-Rank	1977		1976		1975		1974		1973		1972		1971	
Order for 1977	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Largemouth bass	9	0.02	173	0.47	71	0.15	3	0.01	7	0.01	5	0.01	1	0.01
Atlantic menhaden	3	0.01	1	0.00	14	0.03	11	0.03	7	0.01	44	0.11	17	0.10
Fourspine stickleback	2	0.00	5	0.01	1	0.00	0	0.00	0	0.00	0	0.00	1	0.01
Shortnose sturgeon	2	0.00	7	0.02	5	0.01	1	0.00	0	0.00	1	0.00	0	0.00
Striped mullet	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Common shiner	1	0.00	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00
Crevalle jack	1	0.00	6	0.02	18	0.04	2	0.01	6	0.01	30	0.07	3	0.02
Summer flounder	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
White bass	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Atlantic croaker	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00
Black crappie	0	0.00	0	0.00	1	0.00	0	0.00	3	0.00	0	0.00	0	0.00
Chain pickerel	0	0.00	0	0.00	4	0.01	0	0.00	0	0.00	0	0.00	0	0 00
Eastern mudminnow	0	0.00	0	0.00	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Emerald shiner	0	0.00	0	0.00	1	0.00	1	0.00	1	0.00	0	0.00	0	0.00
Rock bass	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Sea lamprey	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Smallmouth bass	0	0.00	1	0.00	1	0.00	0	0.00	1	0.00	0	0.00	0	0.00
Squirrel hake	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Tautog or Blackfish	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00
White crappie	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00
White mullet	0	0.00	0	0.00	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00
UID Acipenser*	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
UID Alosa*	0	0.00	28	0.08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
UID Cyprinidae*	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
UID Fundulus*	0	0.00	5	0.01	0	0.00	0	0.00	53	0.08	0	0.00	77	0.47
UID Morone*	0	0.00	15	0.04	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
UID Notropis*	0	0.00	0	0.00	0	0.00	1	0.00	6	0.01	0	0.00	0	0.00
UID mutilated*	0	0.00	0	0.00	0	0.00	6	0.02	0	0.00	0	0.00	0	0.00
Total Number of Fish	45111	-	36623	-	46749	-	34907	-	65664	-	40606	-	16426	-
Total Number of Species*	43	-	40	-	43	-	36	-	39	-	35	-	30	-

*UID fish not counted as a separate species in total
- Not applicable

TABLE V-30

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

FISH SPECIES INVENTORY

BOWLINE VICINITY - 1971-1977

FAMILY	COMMON NAME	SCIENTIFIC NAME
Acipenseridae	Atlantic sturgeon	*Acipenser oxyrhynchus*
	Shortnose sturgeon	*Acipenser brevirostrum*
Anguillidae	American eel	*Anguilla rostrata*
Atherinidae	Atlantic silverside	*Menidia menidia*
	Tidewater silverside	*Menidia beryllina*
	Rough silverside	*Membras martinica*
Belonidae	Atlantic needlefish	*Strongylura marina*
Bothidae	Summer flounder	*Paralichthys dentatus*
Carangidae	Crevalle jack	*Caranx hippos*
Catostomidae	White sucker	*Catostomus commersoni*
Centrarchidae	Black crappie	*Pomoxis nigromaculatus*
	Bluegill	*Lepomis macrochirus*
	Largemouth bass	*Micropterus salmoides*
	Pumpkinseed	*Lepomis gibbosus*
	Redbreast sunfish	*Lepomis auritus*
	Rockbass	*Ambloplites rupestris*
	Smallmouth bass	*Micropterus dolomieui*
	White crappie	*Pomoxis annularis*
Clupeidae	Alewife	*Alosa pseudoharengus*
	American shad	*Alosa sapidissima*
	Atlantic menhaden	*Brevoortia tyrannus*
	Blueback herring	*Alosa aestivalis*
	Gizzard shad	*Dorosoma cepedianum*
Cyprinidae	Carp	*Cyprinus carpio*
	Common shiner	*Notropis cornutus*
	Emerald shiner	*Notropis atherinoides*
	Golden shinre	*Notemigonus crysoleucas*
	Goldfish	*Carassius auratus*
	Spottail shiner	*Notropis hudsonius*
Cyprinodontidae	Banded killifish	*Fundulus diaphanus*
	Mummichog	*Fundulus heteroclitus*

TABLE V-30(Continued)

FISH SPECIES INVENTORY

FAMILY	COMMON NAME	SCIENTIFIC NAME
Engraulidae	Bay anchovy	Anchoa mitchilli
Esocidae	Chain pickerel	Esox niger
Gadidae	Altantic tomcod	Microgadus tomcod
	Squirrel hake	Urophycis chuss
Gasterosteidae	Fourspine stickleback	Apeltes quadracus
Ictaluridae	Brown bullhead	Ictalurus nebulosus
	White catfish	Ictalurus catus
Labridae	Tautog (Blackfish)	Tautoga onitis
Mugilidae	White mullet	Mugil curema
	Striped mullet	Mugil cephalus
Osmeridae	Rainbow smelt	Osmerus mordax
Percichthyidae	Striped bass	Morone saxatilis
	White perch	Morone americana
	White bass	Morone chrysops
Percidae	Tessellated darter	Etheostoma olmstedi
	Yellow perch	Perca flavescens
Petromyzontidae	Sea lamprey	Petromyzon marinus
Pomatomidae	Bluefish	Pomatomus saltatrix
Sciaenidae	Atlantic croaker	Micropogon undulatus
	Spot	Leiostomus xanthurus
	Weakfish	Cynoscion regalis
Soleidae	Hogchoker	Trinectes maculatus
Syngnathidae	Northern pipefish	Syngnathus fuscus
Umbridae	Eastern mudminnow	Umbra pygmaea

Comparison of total numbers of fish collected during each year reflects unequal sampling between years, but percent composition of the total annual catch, being less dependent upon sampling effort, may provide useful comparisons. Large shifts in species composition have occurred during the seven years of investigation in the Bowline area (Table V-31). These shifts are typical of the euryhaline segment of an estuary, where the degree of salt intrusion varies greatly between years and seasons, and where marine stocks such as bluefish, weakfish, Atlantic silverside, Atlantic menhaden, and spot provide a significant but rather inconsistent contribution to recruitment into the area.

The three most abundant species at Bowline never maintained the same rank order and, except for white perch, the dominant segment of the Bowline fish community was seldom composed of the same three fish species (Table V-31). Figure V-2 graphically illustrates the year-to-year variation of six representative species and their contribution to the total yearly abundance in the Bowline vicinity.

The ten most abundant species from 1971 to 1977 are listed in Table V-31, and the total percent composition represented by the three, five, and ten most dominant species in each year is shown.

b. Annual Abundance

(i) White Perch

White perch, the only resident species which ranked among the most abundant species for each of the seven years

TABLE V-31

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

RELATIVE RANKING OF THE TEN MOST ABUNDANT FISH SPECIES

BOWLINE VICINITY - 1971-1977

	1971			1972			1973		
RANK	SPECIES	%	%	SPECIES	%	%	SPECIES	%	%
1	White perch	41.3		White perch	28.6		Bay anchovy	35.9	
2	Striped bass	23.1		Bay anchovy	25.9		Blueback herring	21.0	
3	Alewife	9.2		Atlantic tomcod	14.6		White perch	15.1	
% Subtotal			73.6			69.1			72.0
4	Blueback herring	8.7		Hogchoker	12.2		Atlantic tomcod	8.0	
5	Bay anchovy	4.0		Blueback herring	8.4		Alewife	5.6	
% Subtotal			86.3			89.7			85.6
6	Atlantic tomcod	3.8		Striped bass	3.7		Hogchoker	5.2	
7	Hogchoker	2.5		Spottail shiner	2.1		Striped bass	3.7	
8	Spottail shiner	2.1		Alewife	1.3		Spottail shiner	1.6	
9	American shad	1.2		American eel	0.5		American shad	0.7	
10	Banded killifish	0.8		American shad	0.4		Weakfish	0.5	
% Total			96.7			97.7			97.3

	1974			1975			1976		
RANK	SPECIES	%	%	SPECIES	%	%	SPECIES	%	%
1	Atlantic tomcod	37.7		White perch	29.0		White perch	26.9	
2	White perch	16.9		Hogchoker	22.7		Hogchoker	24.0	
3	Hogchoker	15.6		Bay anchovy	12.2		Atlantic tomcod	7.8	
% Subtotal			70.2			63.9			58.7
4	Bay anchovy	7.2		Striped bass	7.0		Blueback herring	7.7	
5	Striped bass	4.6		Atlantic tomcod	6.6		American shad	5.6	
% Subtotal			80.2			77.5			70.2
6	Alewife	3.4		Blueback herring	5.6		Spot	3.9	
7	Blueback herring	2.8		Redbreast sunfish	2.5		Spottail shiner	3.4	
8	Banded killifish	2.8		Pumpkinseed	2.2		Striped bass	3.1	
9	Spottail shiner	2.0		Banded killifish	2.2		Banded killifish	2.7	
10	Pumpkinseed	1.5		Spottail shiner	1.8		Redbreast sunfish	2.6	
% Total			94.5			91.8			87.7

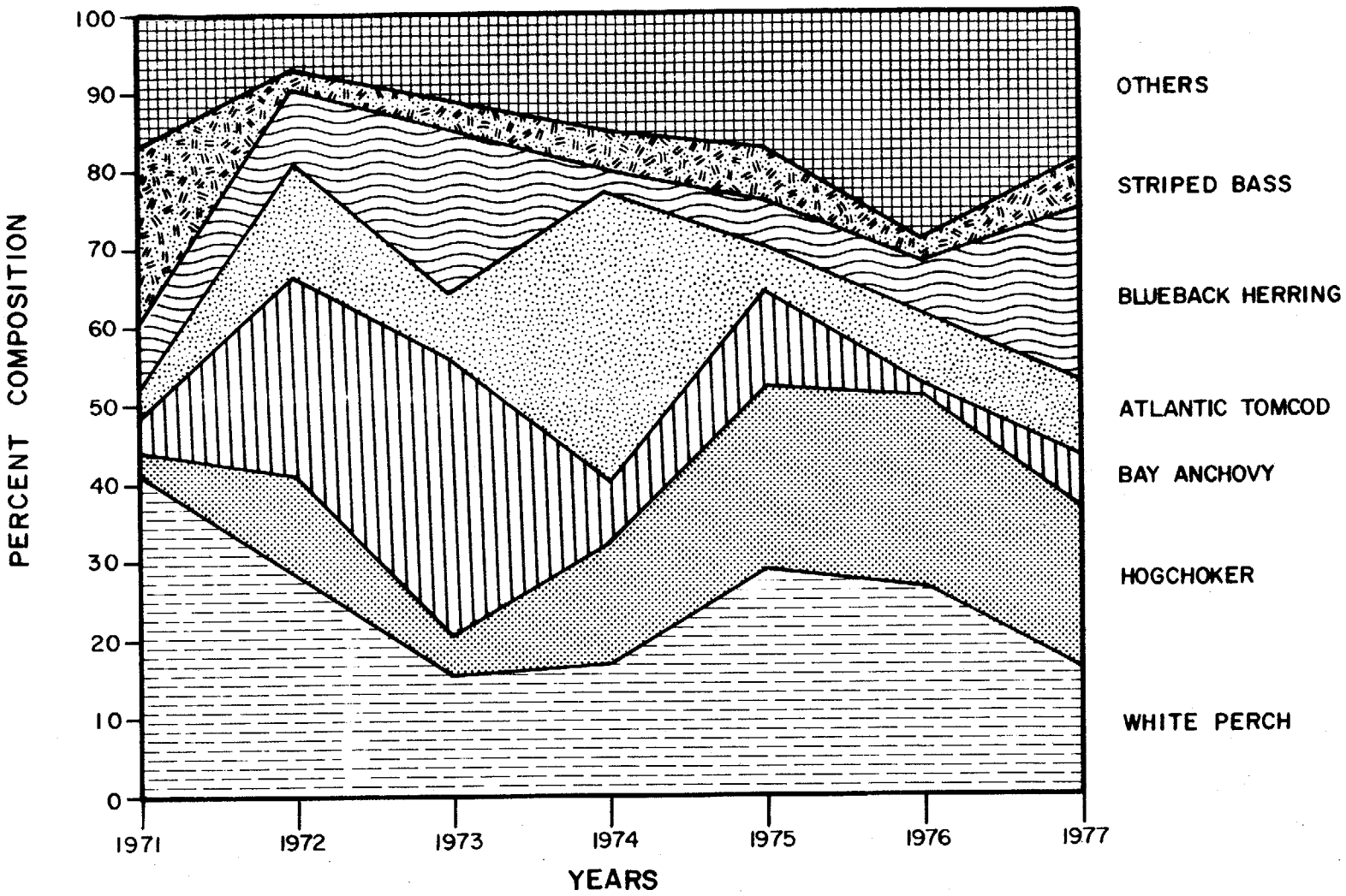
	1977		
RANK	SPECIES	%	%
1	Blueback herring	22.4	
2	Hogchoker	20.7	
3	White perch	15.6	
% Subtotal			58.7
4	Atlantic tomcod	9.6	
5	Bay anchovy	6.5	
% Subtotal			74.8
6	Striped bass	5.4	
7	Spot	4.3	
8	American shad	2.5	
9	Spottail shiner	1.9	
10	Banded killifish	1.8	
% Total			90.7

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

PERCENT COMPOSITION OF SIX SELECTED SPECIES

BOWLINE VICINITY 1971 - 1977



FOR ALL GEARS AND STATIONS

FIGURE V-2

studied, was most abundant during 1971 in seine catches and during 1972 in bottom trawl catches (Table V-32). The seven-year trend in white perch abundance at Bowline, based on bottom trawl and seine data in Table V-32, suggests a fairly stable overall population whose density appears to fluctuate over the time period studied. Seine C/f values in 1971-1972 were based on the less efficient 50-ft bag seine, thus providing potentially lower values than for subsequent years.

It should also be noted that these abundance trends are based on sampling at a single kilometer point on the Hudson River, and may not be representative of trends within the Hudson River population as a whole. Physical factors such as river flow and salinity may influence the longitudinal distribution of white perch in the estuary, thus affecting the densities observed in the Bowline vicinity.

(ii) Striped Bass

As estimated by bottom trawl data (Table V-32), striped bass were most abundant at Bowline during 1971, but they were least abundant during 1972, 1976 and 1977. As estimated by seine collections (Table V-32), striped bass exhibited just the opposite trend and were most abundant at Bowline during 1977 with low abundances occurring in 1974 and 1976. This actually represents an estimated trend in year-class strength, since relatively few yearling and older striped bass were collected.

The difficulty of estimating relative abundance using localized sampling becomes especially noticeable in the case

TABLE V-32

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

COMPARISON OF AVERAGE CATCH PER UNIT EFFORT FOR DAY SAMPLING DURING COMMON MONTHS[a] AND AT COMMON STATIONS[b]

BOWLINE VICINITY - 1971-1977

	1971			1972			1973			1974		
SPECIES	SURFACE TRAWL	BOTTOM TRAWL	SEINE[c]	SURFACE TRAWL	BOTTOM TRAWL	SEINE[c]	SURFACE TRAWL	BOTTOM TRAWL	SEINE	SURFACE TRAWL	BOTTOM TRAWL	SEINE
White perch	NA	145.7	23.2	NA	148.8	4.6	NA	114.0	3.7	NA	117.2	2.8
Atlantic tomcod	NA	16.8	NA	NA	87.5	NA	NA	48.4	NA	NA	268.6	NA
Bay anchovy	22.9	16.8	0.0	173.4	13.1	11.8	829.1	0.6	3.9	56.3	4.7	0.2
Hogchoker	NA	6.3	NA	NA	79.0	NA	NA	41.3	NA	NA	73.2	NA
Blueback herring	40.2	6.0	46.5	47.6	0.5	18.4	3.5	5.1	57.7	1.5	0.5	4.7
Striped bass	NA	91.3	2.5	NA	18.1	0.9	NA	32.6	1.3	NA	45.2	0.2
TOTAL EFFORTS	10	31	12	18	39	24	14	37	21	8	21	12

	1975			1976			1977		
SPECIES	SURFACE TRAWL	BOTTOM TRAWL	SEINE	SURFACE TRAWL	BOTTOM TRAWL	SEINE	SURFACE TRAWL	BOTTOM TRAWL	SEINE
White perch	NA	103.3	11.8	NA	80.6	7.3	NA	73.3	21.17
Atlantic tomcod	NA	23.9	NA	NA	42.2	NA	NA	36.5	NA
Bay anchovy	65.6	4.4	8.0	2.0	4.4	0.8	32.4	1.7	8.5
Hogchoker	NA	146.9	NA	NA	102.7	NA	NA	113.5	NA
Blueback herring	11.9	0.3	11.4	1.6	0.3	13.9	3.4	0.1	111.4
Striped bass	NA	40.5	1.5	NA	4.8	0.3	NA	12.8	9.4
TOTAL EFFORTS	16	42	15	18	44	26	18	45	28

[a] Common sampling months between years are as follows:
Surface trawling - AUG, SEP, OCT, NOV
Bottom trawling - MAY, JUN, AUG, SEP, OCT, NOV, DEC
Seining (Bowline Pond only) - JUN, JUL, AUG, SEP, OCT, NOV

[b] Common Stations:
Surface trawling - BID, BC
Bottom trawling - BB, BID, BC
Seining (Bowline Pond only) - BPI, BPSS (BP)

[c] Seines used during 1971 and 1972 were only 50 feet long. Seines used during 1973-1977 were 100 feet long.

NA - Collection method not appropriate for this species.

of striped bass because of the significant negative correlation ($r = -0.90$) existing between river flow and abundance at Bowline as estimated by the bottom trawl (O&R 1977). This suggests that the young striped bass, seeking an optimum salinity regime, tend to move downstream from the Bowline area during periods of high flow. A river-wide sampling program, conducted over the same time period using identical gear, may have shown a different trend than the one presented here.

(iii) Atlantic Tomcod

Atlantic tomcod, the most abundant species during 1974, was least abundant during 1971 (Table V-32). Length frequency data analyzed since 1971 show that the majority of the tomcod catch has been composed of young-of-the-year fish (O&R 1977); therefore, differences in C/f between years appear to be primarily a function of year-class strength for 0-age fish.

A previous report (O&R 1977) demonstrated that the 1974 tomcod abundance was significantly greater ($\alpha = 0.05$) than during 1975; however, no significant differences could be discerned between other years, with 1977 tomcod abundances falling within the expected range.

(iv) Bay Anchovy

Bay anchovy are the only other predominantly single-age spawners of major importance in the Bowline area, and Table V-32 shows large oscillations for this species also. However, it should be noted that the abundance peak for 1973 was the result of a single catch of 9,169 bay anchovy (C/f = 13,098.6) which raised the annual average C/f value from

10.7 (N=13) to 829.1 (N=14). The existing data base, therefore, may not provide a sufficiently precise estimate of relative annual abundance for this tightly schooling species.

(v) Hogchoker

The hogchoker was the only major species examined which exhibited a trend of increasing abundance at Bowline from 1971 through 1977 (Table V-32).

Hogchoker presence in the Bowline vicinity has been found to be strongly related to freshwater flows throughout the critical months of September through November (O&R 1977). High Hudson River flows during this period act to move the saltwater-freshwater interface downstream into or past the Bowline vicinity, thus increasing the probability of large hogchoker catches during the fall.

(vi) American Shad

American shad is the most important commercial fish species in the Hudson River. Because shad eggs are spawned in the upper reaches of the river, and the young move downstream past the power plants throughout the summer and fall, this species is potentially vulnerable to entrainment and impingement. It is therefore relevant to examine fluctuations in year-class strength to determine whether a trend of decreasing recruitment existed for this species during the 1971-1977 period, which was characterized by increasing power plant water usage.

The general trend for American shad can be examined using data presented in Table V-29. It appears that abundance of young-of-the-year shad was at a high point during 1976 after four years of relatively low abundances. The 1977 data suggest a slight decrease in abundance; however, these trends must be interpreted with caution as sampling effort and salinity factors have changed over the years.

(vii) Blueback Herring

Blueback herring catches have fluctuated greatly over the seven-year study period (Table V-32). In 1977 this species ranked first in terms of total abundance, although they have ranked as low as seventh in 1974 (Table V-31). The high numbers in 1977 were partly the result of two large seine hauls on 5 October; 2,613 blueback herring were collected at the Bowline Pond northeast seine site and 1,726 were collected at the Bowline Pond inlet seine site.

As estimated by selected surface trawl collections (Table V-32), blueback herring abundance showed a decline from 1971 and 1972 to all other years. However, as estimated by seine C/f, abundances showed two peaks within the seven-year sampling program, one in 1973 and the other in 1977. These data suggest that some factor such as salinity, temperature, or presence of a predator may influence blueback herring to move nearshore, thus precluding representative sampling by the surface trawls.

c. Habitat Preference and Nursery Areas

(i) Hudson River Stations

Three bottom trawl stations were sampled in the Hudson River at Bowline: a shallow nearshore station adjacent to the

discharge (BB), and two deeper stations located in more open water (BID, on the west side of the channel directly south of the discharge and within the area of the thermal plume, and BC, on the east side of the channel). The distribution of the 1977 catch-per-effort by species at each station is shown in Tables V-14 through V-16. During 1977 the three bottom trawl stations accounted for 23,619 fish representing 29 species. Catch-per-effort for 1975 through 1977 at the three bottom trawl stations is presented in Figures V-3 through V-7 for all species combined, hogchoker, white perch, Atlantic tomcod, and striped bass.

The seasonal appearance of large numbers of hogchokers at Bowline control (BC) resulted in high total C/f values during October and November. During August and September of 1977 (Table V-2), and September 1976 (O&R 1977) large numbers of spot moved into the Bowline area, providing a substantial portion of the total C/f values. Atlantic tomcod, another species collected in substantial numbers in bottom trawls, were abundant during June 1976 and June and July 1977 (Figure V-6). The majority of these fish were young-of-the-year which were recruited into the bottom trawl fishery in May, as shown by length frequency data presented in Table V-25. The 1975-1976 C/f data for bottom trawl collections are presented in O&R (1977), and 1977 C/f data are presented in Table V-21.

C/f data for striped bass (Figure V-7) clearly indicate a preference for the shallow BB station nearest the discharge. Striped bass were not excluded from this area by the thermal plume, since they were relatively abundant here during the warmest months of the year, nor were they induced by the

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

CATCH OF TOTAL FISH PER 10-MINUTE BOTTOM TRAWL EFFORT AT THREE STATIONS

BOWLINE VICINITY - 1975 - 1977

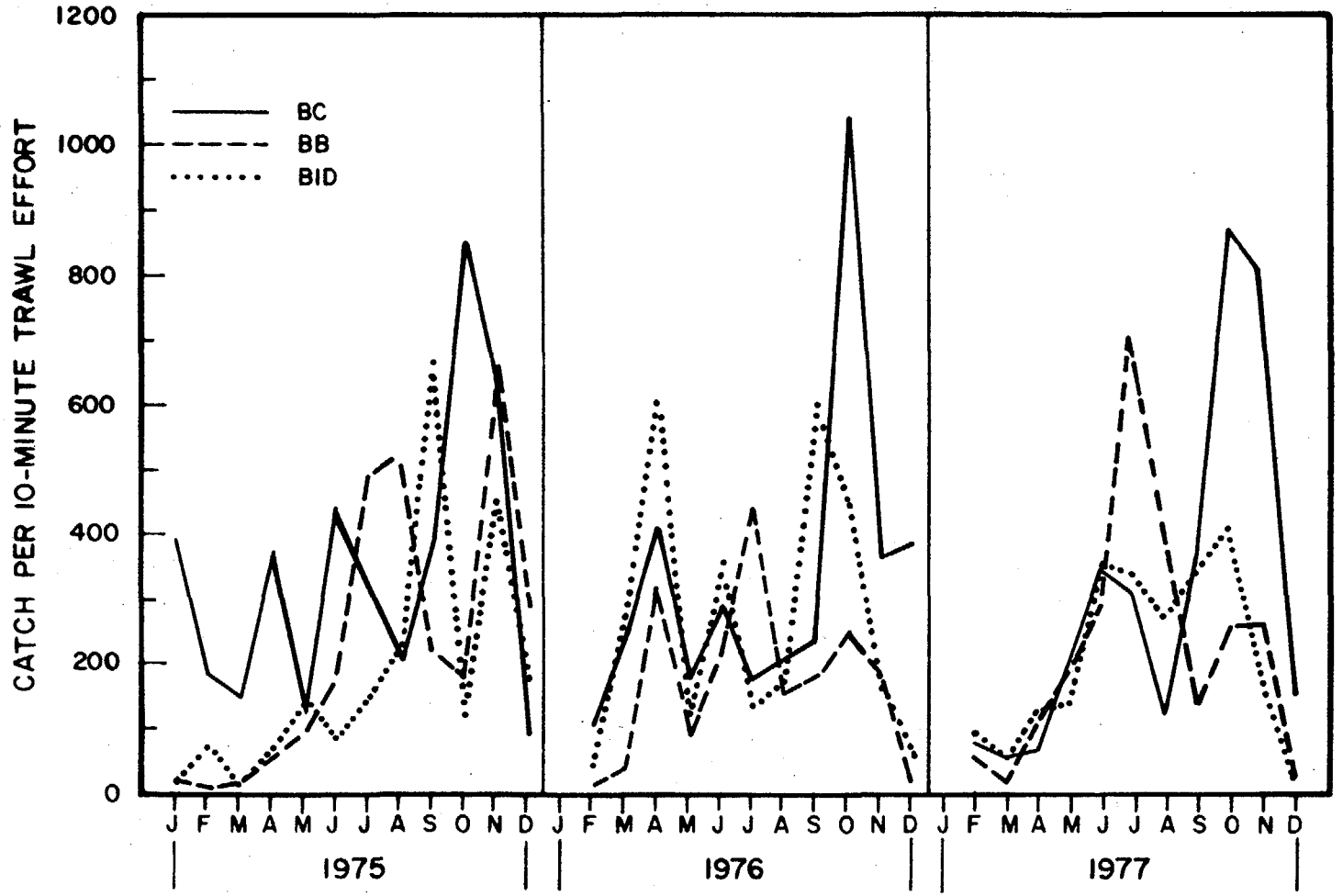


FIGURE V-3

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

CATCH OF HOGCHOKER
PER 10-MINUTE BOTTOM TRAWL EFFORT
AT THREE STATIONS

BOWLINE VICINITY - 1975 - 1977

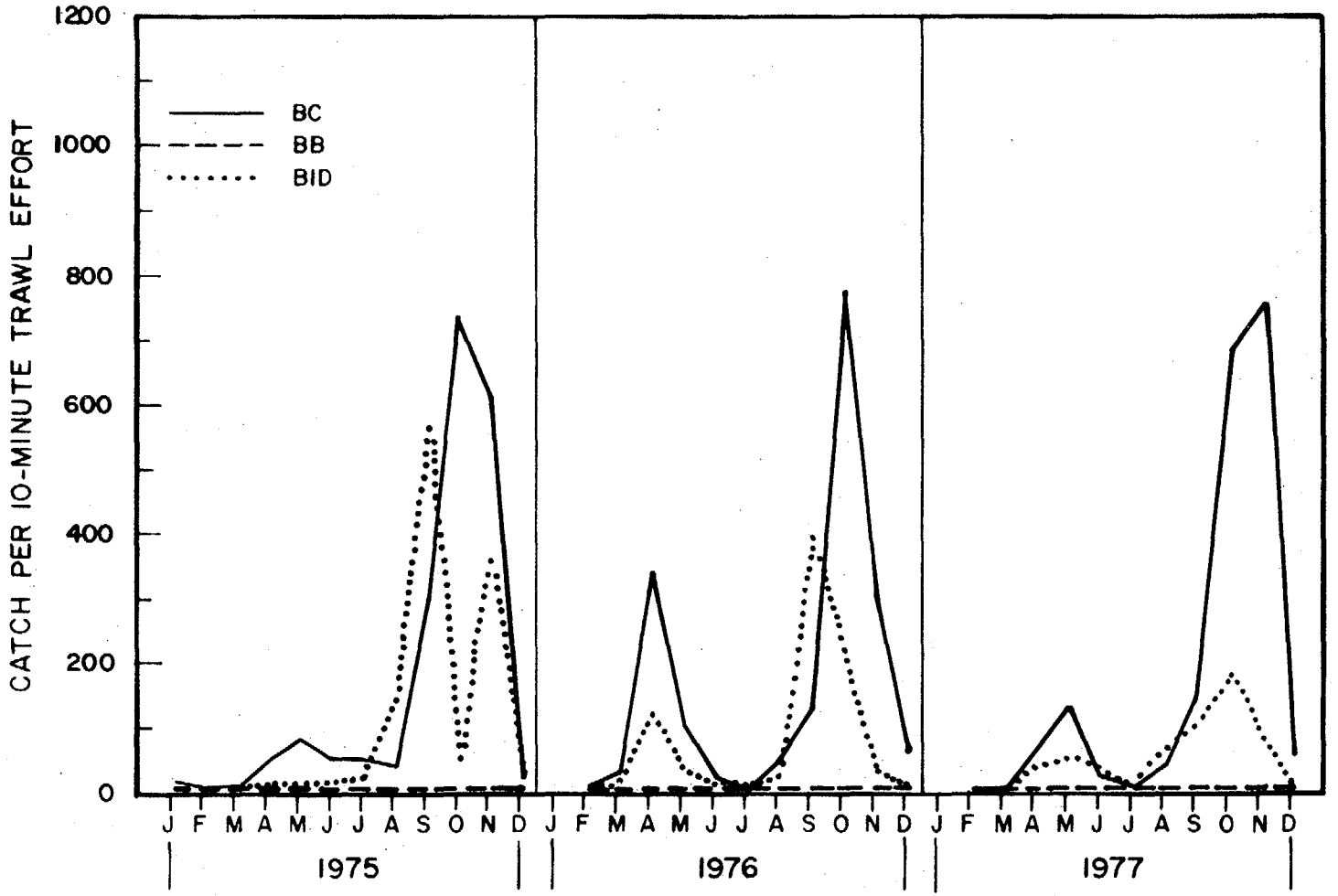


FIGURE V-1

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

CATCH OF WHITE PERCH PER 10-MINUTE BOTTOM TRAWL EFFORT AT THREE STATIONS

BOWLINE VICINITY - 1975 - 1977

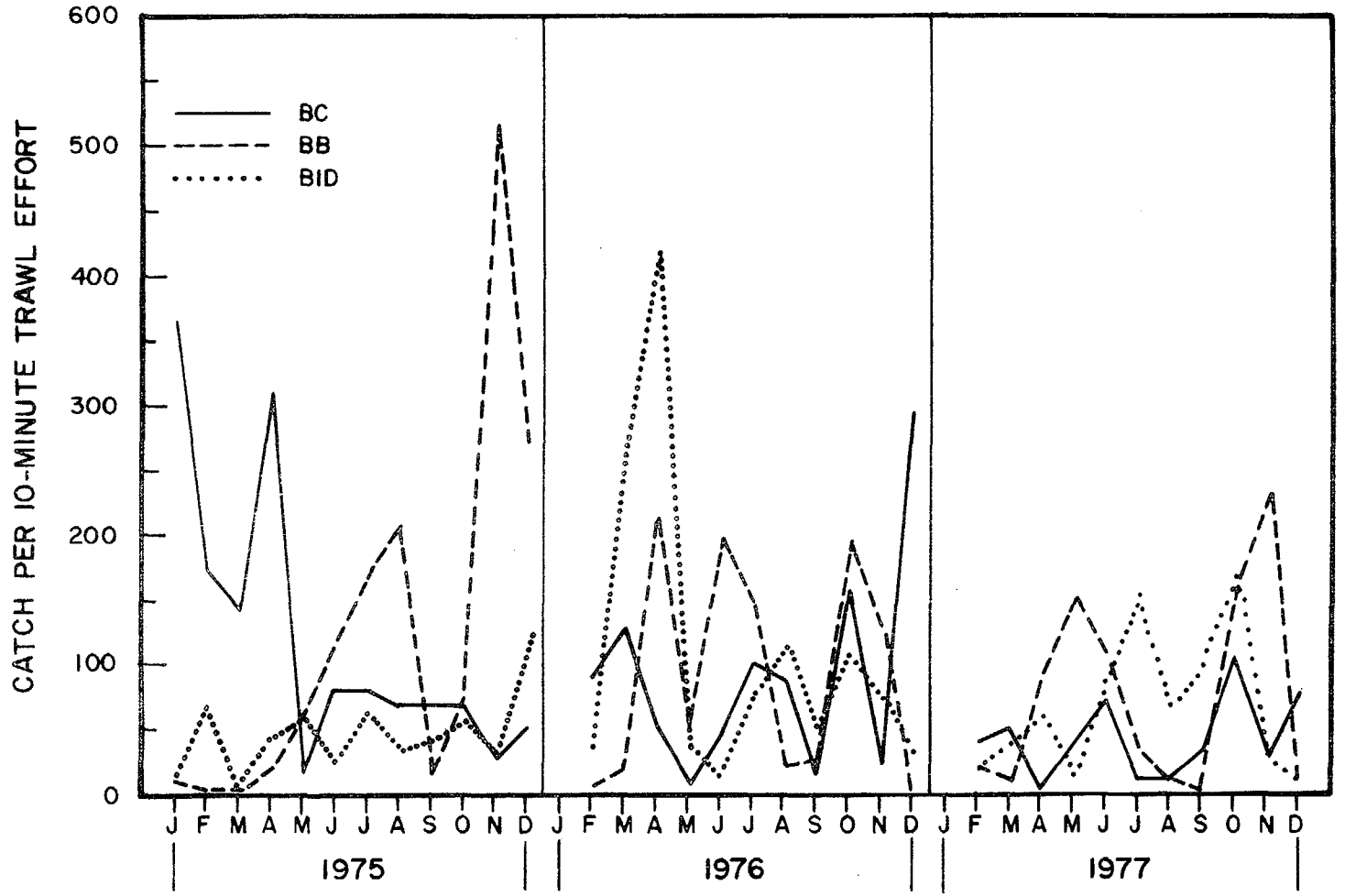


FIGURE V-5

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

CATCH OF ATLANTIC TOMCOD PER 10-MINUTE BOTTOM TRAWL EFFORT AT THREE STATIONS

BOWLINE VICINITY - 1975-1977

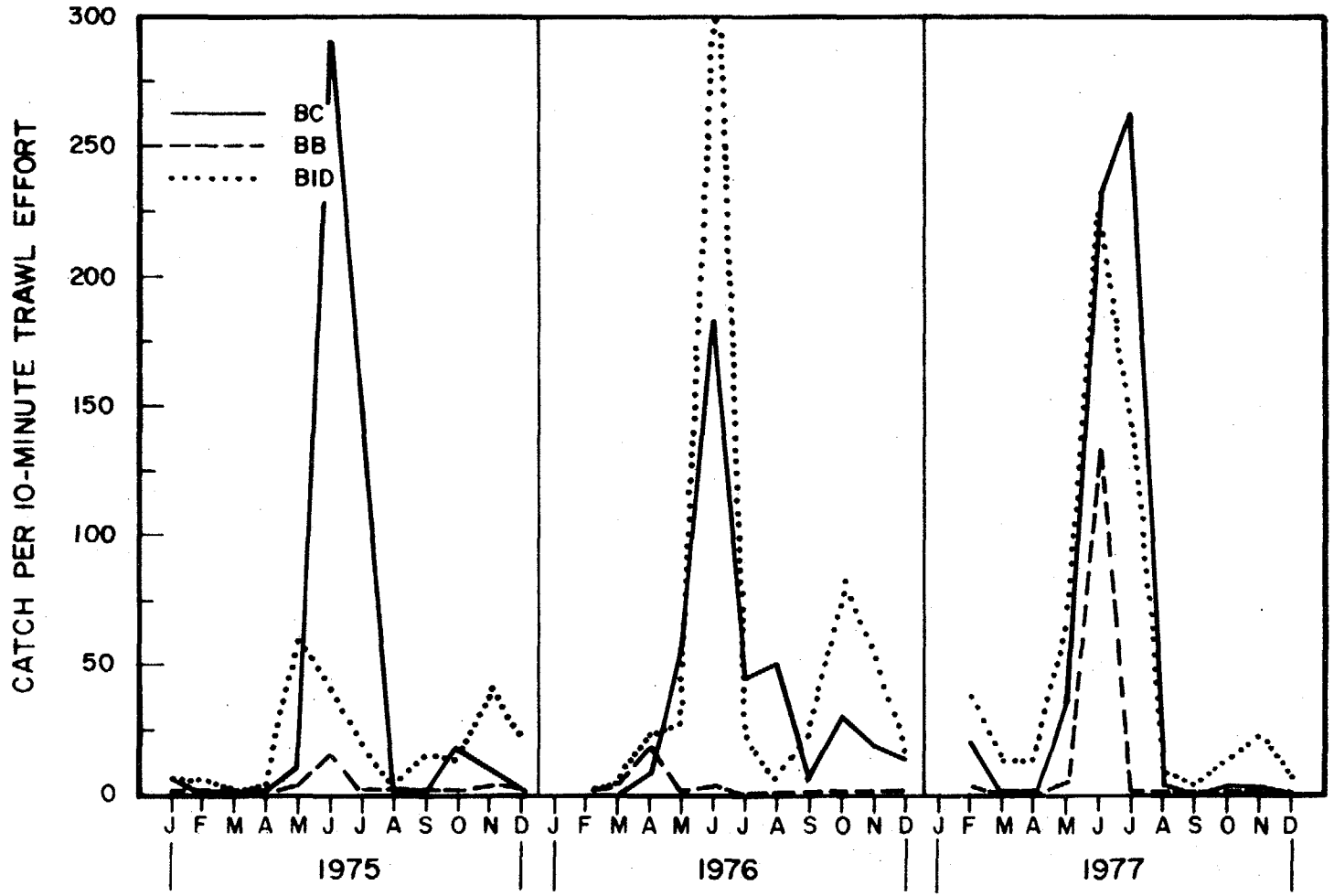


FIGURE V-6

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

CATCH OF STRIPED BASS
PER 10-MINUTE BOTTOM TRAWL EFFORT
AT THREE STATIONS

BOWLINE VICINITY - 1975 - 1977

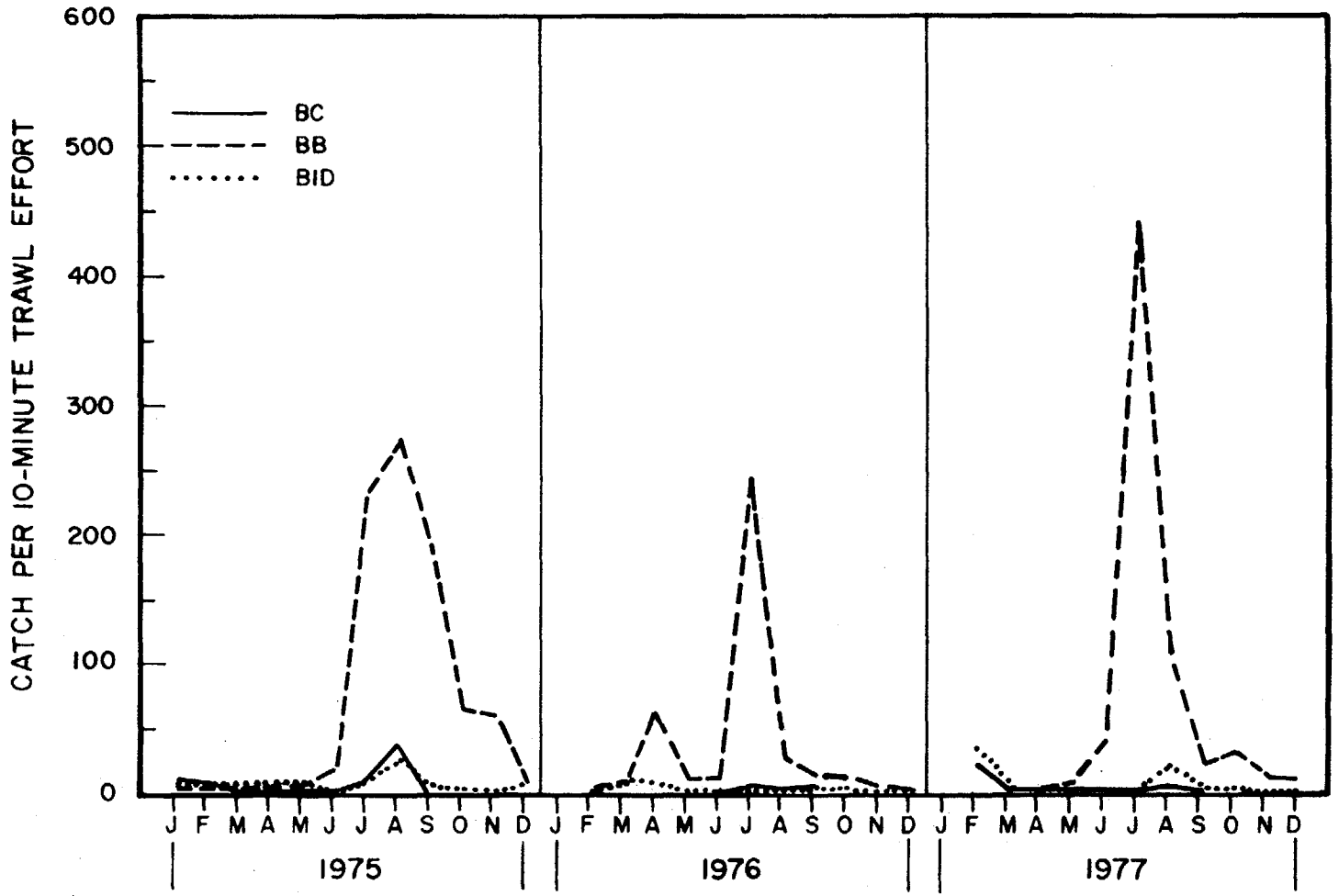


FIGURE V-7

thermal plume to remain in the area during the winter, since their abundance at BB declined during the fall as water temperatures dropped.

There was no consistent distribution of white perch abundance among the three river stations at Bowline (Figure V-5), although they did move from the shallow water of Station BB during December, indicating no attraction to the area closest to the thermal plume. Analysis of the mean length of white perch collected at each station (Tables V-33 to V-35) shows that the larger, older fish were consistently found at the deeper stations, while the area around BB apparently functioned as a nursery area for young-of-the-year fish during the summer and fall months.

(ii) Pond vs. River Comparisons

The Bowline Point intake is located in a small pond (Bowline Pond) connected to the river, rather than in the river proper. Based on seine collections in both the pond and the river during 1975 and 1976, the greatest total number of species occurred in the pond (O&R 1977): 31 species in the pond and 21 species in the river from September through December 1975, and 33 and 28 species in the pond and river, respectively, from February through December 1976.

The 1977 pond seine collections accounted for 14,937 fish of 36 species as compared to river seine collections which yielded 4,470 fish of 35 species. More species were collected in both the pond and river seine collections than during 1975 and 1976, and the pond seines produced nearly three times as many fish as river seines. Without blueback herring, however, the difference is reduced to 2,651 fish,

TABLE V-33

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION BB BOTTOM TRAWL

INTERVAL (CM)	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.6
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.6
6.1- 7.0	0	.0	1	6.3	0	.0	2	1.7	10	5.3	4	2.6
7.1- 8.0	0	.0	1	6.3	0	.0	5	4.2	7	3.7	29	18.7
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	8	5.2
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	2	1.1	1	.6
10.1- 11.0	0	.0	0	.0	0	.0	7	5.9	30	16.0	19	12.3
11.1- 12.0	0	.0	1	6.3	1	5.3	20	16.9	58	30.9	33	21.3
12.1- 13.0	0	.0	1	6.3	4	21.1	16	13.6	39	20.7	28	18.1
13.1- 14.0	0	.0	1	6.3	6	31.6	17	14.4	13	6.9	8	5.2
14.1- 15.0	0	.0	0	.0	0	.0	18	15.3	9	4.8	6	3.9
15.1- 16.0	0	.0	2	12.5	2	10.5	14	11.9	10	5.3	5	3.2
16.1- 17.0	0	.0	1	6.3	4	21.1	9	7.6	9	4.8	10	6.5
17.1- 18.0	0	.0	2	12.5	0	.0	6	5.1	1	.5	1	.6
18.1- 19.0	0	.0	2	12.5	0	.0	3	2.5	0	.0	1	.6
19.1- 20.0	0	.0	1	6.3	1	5.3	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	2	12.5	1	5.3	1	.8	0	.0	0	.0
21.1- 22.0	0	.0	1	6.3	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		16		19		118		188		155	
MEAN LENGTH			15.9		14.6		13.5		12.0		11.2	
VARIANCE			19.76		5.87		6.87		5.03		7.95	

TABLE V-33 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION 88 BOTTOM TRAWL

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	1	1.9	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	28	51.9	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	24	44.4	1	4.8	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	1	1.9	5	23.8	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	11	52.4	1	12.5	6	5.8	3	1.4	0	.0
6.1- 7.0	0	.0	0	.0	2	25.0	23	22.3	23	11.1	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	19	18.4	47	22.6	1	100.0
8.1- 9.0	0	.0	0	.0	0	.0	4	3.9	31	14.9	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	1	1.0	3	1.4	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	3	2.9	5	2.4	0	.0
11.1- 12.0	0	.0	1	4.8	0	.0	15	14.6	18	8.7	0	.0
12.1- 13.0	0	.0	1	4.8	0	.0	10	9.7	18	8.7	0	.0
13.1- 14.0	0	.0	0	.0	1	12.5	12	11.7	25	12.0	0	.0
14.1- 15.0	0	.0	0	.0	1	12.5	5	4.9	20	9.6	0	.0
15.1- 16.0	0	.0	2	9.5	1	12.5	4	3.9	8	3.8	0	.0
16.1- 17.0	0	.0	0	.0	1	12.5	1	1.0	5	2.4	0	.0
17.1- 18.0	0	.0	0	.0	1	12.5	0	.0	2	1.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	54		21		8		103		208		1	
MEAN LENGTH	3.0		6.8		12.0		9.9		10.4		7.1	
VARIANCE	.23		12.91		23.96		9.97		10.02			

EDTC

TABLE V-34

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION BID BOTTOM TRAWL

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	3	12.5	4	3.5	1	.9	2	4.2	0	.0
6.1- 7.0	0	.0	9	37.5	22	19.3	2	1.8	3	6.3	0	.0
7.1- 8.0	0	.0	0	.0	22	19.3	5	4.5	1	2.1	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	1	.9	3	2.7	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	7	6.1	30	26.8	1	2.1	0	.0
11.1- 12.0	0	.0	0	.0	17	14.9	28	25.0	1	2.1	5	2.6
12.1- 13.0	0	.0	0	.0	10	8.8	19	17.0	0	.0	15	7.9
13.1- 14.0	0	.0	0	.0	7	6.1	8	7.1	2	4.2	19	9.9
14.1- 15.0	0	.0	2	8.3	4	3.5	6	5.4	6	12.5	13	6.8
15.1- 16.0	0	.0	0	.0	4	3.5	6	5.4	5	10.4	16	8.4
16.1- 17.0	0	.0	2	8.3	4	3.5	1	.9	8	16.7	21	11.0
17.1- 18.0	0	.0	6	25.0	5	4.4	3	2.7	6	12.5	26	13.6
18.1- 19.0	0	.0	1	4.2	4	3.5	0	.0	7	14.6	30	15.7
19.1- 20.0	0	.0	1	4.2	3	2.6	0	.0	3	6.3	22	11.5
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	2	4.2	13	6.8
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	1	2.1	5	2.6
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	1.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	4	2.1
TOTAL ANALYZED	0		24		114		112		48		191	
MEAN LENGTH			11.8		10.9		11.9		15.5		17.0	
VARIANCE			32.33		15.79		4.78		16.40		7.97	

TABLE V-34 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION B1D BOTTOM TRAWL

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	1	.6	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	1	.6	2	1.4	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	1	.7	1	.9	1	.7	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	15	10.2	6	5.5	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	14	9.5	15	13.8	4	26.7
8.1- 9.0	1	.6	0	.0	0	.0	3	2.0	7	6.4	1	6.7
9.1- 10.0	7	4.4	2	1.4	1	.9	1	.7	3	2.8	0	.0
10.1- 11.0	10	6.3	4	2.9	2	1.7	5	3.4	7	6.4	0	.0
11.1- 12.0	11	6.9	8	5.8	6	5.2	11	7.5	10	9.2	4	26.7
12.1- 13.0	25	15.6	7	5.0	5	4.3	9	6.1	2	1.8	3	20.0
13.1- 14.0	41	25.6	30	21.6	22	19.1	15	10.2	14	12.8	0	.0
14.1- 15.0	19	11.9	51	36.7	34	29.6	36	24.5	21	19.3	3	20.0
15.1- 16.0	20	12.5	16	11.5	30	26.1	18	12.2	13	11.9	0	.0
16.1- 17.0	13	8.1	8	5.8	6	5.2	12	8.2	8	7.3	0	.0
17.1- 18.0	6	3.8	6	4.3	6	5.2	3	2.0	2	1.8	0	.0
18.1- 19.0	4	2.5	2	1.4	1	.9	1	.7	1	.9	0	.0
19.1- 20.0	0	.0	2	1.4	1	.9	3	2.0	0	.0	0	.0
20.1- 21.0	1	.6	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	160		139		115		147		109		15	
MEAN LENGTH	13.7		14.2		14.5		12.7		12.3		11.1	
VARIANCE	5.73		4.62		3.31		12.19		10.84		7.19	

TABLE V-35

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION BC BOTTOM TRAWL

INTERVAL (CM)	JAN NO.	JAN PCNT	FEB NO.	FEB PCNT	MAR NO.	MAR PCNT	APR NO.	APR PCNT	MAY NO.	MAY PCNT	JUN NO.	JUN PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	1	1.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	3	3.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	20	20.0	11	10.4	0	.0	2	2.0	0	.0
7.1- 8.0	0	.0	5	5.0	8	7.5	2	9.5	4	3.9	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	1	1.0	0	.0
10.1- 11.0	0	.0	2	2.0	15	14.2	1	4.8	0	.0	1	.5
11.1- 12.0	0	.0	0	.0	14	13.2	2	9.5	1	1.0	5	2.3
12.1- 13.0	0	.0	1	1.0	17	16.0	4	19.0	0	.0	12	5.5
13.1- 14.0	0	.0	2	2.0	4	3.8	3	14.3	1	1.0	15	6.8
14.1- 15.0	0	.0	5	5.0	8	7.5	5	23.8	2	2.0	19	8.6
15.1- 16.0	0	.0	17	17.0	11	10.4	0	.0	4	3.9	28	12.7
16.1- 17.0	0	.0	13	13.0	3	2.8	3	14.3	19	18.6	43	19.5
17.1- 18.0	0	.0	12	12.0	5	4.7	0	.0	24	23.5	40	18.2
18.1- 19.0	0	.0	8	8.0	1	.9	1	4.8	26	25.5	34	15.5
19.1- 20.0	0	.0	8	8.0	7	6.6	0	.0	8	7.8	14	6.4
20.1- 21.0	0	.0	2	2.0	1	.9	0	.0	5	4.9	5	2.3
21.1- 22.0	0	.0	0	.0	1	.9	0	.0	3	2.9	2	.9
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	2	2.0	1	.5
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	1	1.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.5
TOTAL ANALYZED	0		100		106		21		102		220	
MEAN LENGTH			13.8		12.7		13.3		17.3		16.6	
VARIANCE			25.48		13.76		7.44		9.99		4.93	

TABLE V-35 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH
AT STATION BC BOTTOM TRAWL

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	1	2.3	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	1	2.3	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	3	1.9	1	.6	2	2.0
6.1- 7.0	0	.0	0	.0	0	.0	14	8.8	6	3.7	5	5.0
7.1- 8.0	0	.0	0	.0	0	.0	20	12.5	13	8.1	17	17.0
8.1- 9.0	0	.0	0	.0	0	.0	6	3.8	11	6.8	11	11.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	1	.6	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	3	1.9	7	4.3	6	6.0
11.1- 12.0	1	2.3	0	.0	2	1.9	14	8.8	16	9.9	12	12.0
12.1- 13.0	1	2.3	1	2.1	1	.9	15	9.4	16	9.9	12	12.0
13.1- 14.0	4	9.3	4	8.3	12	11.2	17	10.6	14	8.7	14	14.0
14.1- 15.0	4	9.3	10	20.8	24	22.4	31	19.4	28	17.4	10	10.0
15.1- 16.0	8	18.6	7	14.6	21	19.6	15	9.4	19	11.8	6	6.0
16.1- 17.0	11	25.6	11	22.9	31	29.0	8	5.0	15	9.3	1	1.0
17.1- 18.0	4	9.3	14	29.2	13	12.1	8	5.0	6	3.7	2	2.0
18.1- 19.0	7	16.3	0	.0	2	1.9	2	1.3	5	3.1	1	1.0
19.1- 20.0	1	2.3	1	2.1	0	.0	2	1.3	2	1.2	0	.0
20.1- 21.0	0	.0	0	.0	1	.9	2	1.3	1	.6	1	1.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	43		48		107		160		161		100	
MEAN LENGTH	15.5		16.0		15.6		12.5		13.1		11.4	
VARIANCE	9.61		2.22		2.00		13.70		11.29		10.50	

TABLE V-36

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

CATCH PER EFFORT OF SELECTED FISH SPECIES IN POND AND RIVER SEINE AND SURFACE TRAWL COLLECTIONS

BOWLINE VICINITY - 1977

SPECIES	POND SEINES c/f	RIVER SEINES c/f	POND SURFACE TRAWLS c/f	RIVER SURFACE TRAWLS c/f
White perch	10.44	6.97	NA	NA
Striped bass	4.41	7.72	NA	NA
Blueback herring	97.22	9.84	8.38	5.03
American shad	5.83	4.65	1.94	1.17
Bluefish	1.52	1.56	NA	NA
Gizzard shad	1.71	0.20	NA	NA
Pumpkinseed	5.85	1.52	NA	NA
Redbreasted sunfish	6.06	0.93	NA	NA
Banded killifish	7.88	0.65	NA	NA
Spottail shiner	5.47	2.67	NA	NA
Alewife	1.15	0.57	0.98	0.08
Bay anchovy	5.33	7.67	37.72	12.78

NA - Collection method not appropriate for this species

as opposed to 10,467 with bluebacks. The remaining difference reflected the preference of other species for the Bowline Pond habitat (Table V-36).

Several species, including blueback herring, gizzard shad, pumpkinseed sunfish, redbreasted sunfish, banded killifish and spottail shiners, exhibited a preference for the pond shoreline habitat over the river shoreline habitat. By contrast, striped bass young-of-the-year and yearlings showed some preference for the river, while others (e.g., American shad and bluefish) showed no preference.

Surface trawls collected 11 species from the pond and 12 from the two river stations. Bay anchovy and blueback herring showed a slight preference for the pond habitat (Table V-36).

VI. IMPINGED ASSEMBLAGES

A. INTRODUCTION

This chapter summarizes the impingement studies performed at the Bowline Point Generating Station during 1977. It includes estimates of the total number impinged for selected species, additional data which characterize impingement at Bowline, a presentation of materials and methods used, and a review of factors influencing impingement rate estimates over the past four years. The estimates of total fish impinged reflect refinements from previous years, and provide basic input to the assessment of impact on fish populations. Because impact cannot be evaluated for all species combined, impingement data are summarized by species. Plant operating data are summarized as well.

B. METHODS AND MATERIALS

To facilitate comparison between the 1977 impingement trends and those of previous years, the methods and materials of earlier impingement studies are included in this section.

1. Intake Characteristics

The Bowline Point Generating Station intake structure is divided into six bays, three for each unit; each bay includes (in order, following water flow) a bar trash rack, a deicing bubbler, a traveling screen and screenwash pump, a chlorine-solution diffuser, and a circulating water pump. The bays for each unit are interconnected downstream of the traveling screens to minimize water velocity when fewer than three circulating water pumps are operating.

There are eight trash racks, six on the front and one on each side of the intake structure. The individual openings through each frontal trash rack are 8.89 cm wide and 9.88 m high.

The traveling screens are of the vertical, two-speed type, and are equipped with manual and automatic controls, spray piping, a splash-proof housing and an automatic washwater shutoff valve. Debris is washed from the front of the screen by water sprayed through the screen. The debris is then discharged into a trash-and-fish trough, to be carried into the common sump for eventual discharge on the northeast side of the intake structure. The traveling screens are constructed of 0.95 cm (0.375 inch) stainless steel mesh.

Several modes of traveling screen operation have been used at Bowline Point. During some of the impingement surveys the regular wash mode may have been changed to help satisfy specific requirements of the surveys.

From fall 1972 to winter 1974, the traveling screens were rotated and operated on an intermittent wash schedule in which they were rotated and washed for 20 minutes every eight hours. This allowed the screens to make two complete rotations. From winter 1974 to June 1975, the screens were placed on a continuous rotation and wash schedule; from June on they were operated on an intermittent schedule, being rotated and washed for 20 minutes every four hours, until November 1975. From this time to June 1976, they were operated continuously. From June 1976 through December 1977, an intermittent screen wash mode was used, except during severe icing conditions in February when the screens were rotated and washed continuously.

During the past six years, several screen wash pressures were evaluated for their ability to maintain clean screens while optimizing impingement survival. From fall 1972 to winter 1974, screen wash pressure was maintained at approximately 100 psi during traveling screen operation. When the screens were placed in continuous operation, in the winter of 1974, wash pressures were reduced to 30 psi. This mode of spray wash operation continued until winter 1976, when the screens were run on an intermittant schedule and the pressures were raised to 60 psi, which is the present mode of operation.

During fall 1975 and winter 1976, the screenwash system was modified by the addition of a secondary low pressure system, which is presently being evaluated with impingement survival studies. A deicing-bubbler air system ahead of the traveling screens protects against ice formation, and is operated as necessary from mid-December to March.

A previous report (O&R 1977) provides a more detailed description of the intake characteristics.

2. Sampling Frequency

Sampling for impinged fish was begun in December 1972 and has continued at a minimum of once a month through December 1977. The dates of surveys and the frequency of collections within a given survey are presented in Table VI-1. Impingement surveys were made weekly in December 1972 and January 1973 and two or three times per month (except in November when only one survey was performed) for

TABLE VI-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

IMPINGEMENT SAMPLING DATES

BOWLINE POINT GENERATING STATION - 1972-1977

	1972		1973		1974		1975		1976		1977	
MONTH	DATE INTERVAL	COLLECTION DATA	DATE INTERVAL	COLLECTION DATA	DATE INTERVAL	COLLECTION DATA	DATE INTERVAL	COLLECTION DATA	DATE INTERVAL	COLLECTION DATA	DATE INTERVAL	COLLECTION DATA
JAN			3-4	dhi	3-4	dhi	2-3	fgik	6-7	fgik	1-2	hikl
			8-9	dhi	16-17	dgi	3-4	bgik	14-15	hik	3-4	hikl
			15-16	dhi	30-31	dgik	6-7	bgik	21-22	hik	4-5	hikl
			23-24	dhi			8-9	fgik	28-29	hik	5-6	hikl
			30-31	dhi			15-16	fgik			6-7	hikl
							22-23	fgik			7-8	hikl
							30-31	fgik			8-9	hikl
											9-10	hikl
											10-11	gikl
											11-12	hikl
											12-13	hikl
											13-14	hikl
											14-15	hikl
											15-16	hikl
											16-17	hikl
											17-18	hikl
											18-19	hikl
											19-20	hikl
											24-25	hikl
											26-27	gikl
											29-30	gikl
											31-1 (FEB)	gikl
FEB			6-7	dhi	13-14	dgik	5-6	fgik	4-5	fhik	2-3	gk
			13-14	dhi			12-13	gik	11-12	fhk	5-6	gikl
			20	ahi			19-20	fgik	18-19	hik	7-8	gikl
									25-26	fgik	9-10	gikl
											12-13	gikl
											14-15	gik
											16-17	gik

TABLE VI-1

IMPINGEMENT SAMPLING DATES (Continued)

MONTH	1972 DATE INTERVAL	1972 COLLECTION DATA	1973 DATE INTERVAL	1973 COLLECTION DATA	1974 DATE INTERVAL	1974 COLLECTION DATA	1975 DATE INTERVAL	1975 COLLECTION DATA	1976 DATE INTERVAL	1976 COLLECTION DATA	1977 DATE INTERVAL	1977 COLLECTION DATA
FEB (Cont)											19-20	gik
											21-22	gik
											23-24	hik
											26-27	hik
											28-1 (MAR)	bhik
MAR			24-25	bchi	6-7	dgik	5-6	fhik	3-4	fgik	2-3	hik
					13-14	dgik	12-13	fgik	10-11	fgk	5-6	hik
					20-21	dgik	19-20	fhik	17-18	fgk	7-8	hik
							26-27	fhik	23	bgk	9-10	hik
									24-25	gik	12-13	hik
									30-31	fhik	14-15	hikl
									31-1 (APR)	fhik	16-17	hikl
											19-20	hikl
											21-22	hikl
											26-27	hikl
											28-29	hikl
											30-31	hikl
APR			10-11	dhi	3-4	dgik	2-3	fhik	7-8	fgik	2-5	hikl
			17-18	dhi	17-18	dgik	9-10	fhik	14-15	fhik	18-19	hikl
			26	ahi			16-17	fhik	15-16	fgik	20-21	hikl
							23-24	fhik	16-17	fgik	23-24	hikl
							29-30	bhik	17-18	bgik	25-26	hikl
									18-19	fgik	27-28	hikl
									19-20	fgik	30-1 (MAY)	hikl
									20-21	fgik		
									21-22	fgik		
									22-23	fgik		
									23-24	fgik		
									24-25	bgik		
									26-27	fgik		
									28-29	fgik		

TABLE VI-1

IMPINGEMENT SAMPLING DATES (Continued)

MONTH	1972 DATE INTERVAL	1972 COLLECTION DATA	1973 DATE INTERVAL	1973 COLLECTION DATA	1974 DATE INTERVAL	1974 COLLECTION DATA	1975 DATE INTERVAL	1975 COLLECTION DATA	1976 DATE INTERVAL	1976 COLLECTION DATA	1977 DATE INTERVAL	1977 COLLECTION DATA
MAY			1-2	cdhi	1-2	dgik	8-9	fhik	5-6	fgik	2-3	hikl
			16-17	bcdhi	8-9	dgik	14-15	fhik	6-7	bgik	4-5	hikl
			31-1	dhi	15-16	dgik	21-22	fgik	13	bgik	7-8	hikl
			(JUN)				28-29	fgk	13-14	gik	9-10	hikl
									17-18	gik	11-12	hikl
									19-20	gik	14-15	hikl
									25-26	gik	16-17	hikl
									26-27	hik	18-19	hikl
											21-22	hikl
											23-24	hikl
											25-26	hikl
											28-29	hikl
											30-31	hikl
JUN			14-15	dhi	5-6	egik	4-5	fgik	1-2	gik	1-2	hikl
			27-28	dhi	12-13	dgik	11-12	fgik	2-3	gik	4-5	hikl
					19-20	egik	18-19	fgik	9-10	hik	6-7	hikl
					26-27	dgik	25-26	fgik	10-11	bhik	8-9	hikl
									16-17	hik	11-12	hikl
									17-18	fhik	13-14	hikl
									21-22	fhik	15-16	hikl
									23-24	bgik	18-19	hikl
									28-29	hik	20-21	hi
									30-1	bhik	22-23	hik
									(JUL)		25-26	hik
											27-28	hik
											29-30	hik

TABLE VI-1

IMPINGEMENT SAMPLING DATES (Continued)

MONTH	1972 DATE INTERVAL	1972 COLLECTION DATA	1973 DATE INTERVAL	1973 COLLECTION DATA	1974 DATE INTERVAL	1974 COLLECTION DATA	1975 DATE INTERVAL	1975 COLLECTION DATA	1976 DATE INTERVAL	1976 COLLECTION DATA	1977 DATE INTERVAL	1977 COLLECTION DATA
JUL			12-13	dhi	2-3	egik	2-3	fgik	7-8	bhik	6-7	hik
			19-20	bdhik	10-11	dgik	9-10	fgik	8-9	bhik	13-14	hik
			26-27	dhik	17-18	fgik	16-17	fhik	21-22	hik	20-21	hik
					24-25	dgik	23-24	fhik	27-28	hik	27-28	hik
							29-30	fhik				
AUG			9-10	dhi	1-2	fgik	6-7	fhik	4-5	hik	3-4	hikl
			29-30	dhi	7-8	dgik	20-21	fgik	11-12	hik	10-11	hikl
			30	adhik	22-23	dgik	27-28	fhik	18-19	hik	17-18	hikl
					28-29	fgik			25-26	hik	24-25	hikl
											31-1 (SEP)	hik
SEP			12-14	dhi	4-5	dgik	3-4	fhik	1-2	hik	14-15	hikl
			17-18	dhik	18-19	dgik	10-11	fhik	8-9	hik	21-22	hk
			26-27	dhik	25-26	fgik	17-18	fhik	15-16	hik		
			27	bdgik			24-25	fhik	23-24	hikl		
									29-30	hik		
OCT			10-11	dhi	2-3	dgik	1-2	fhik	6-7	hik	1-2	hk
			31-1 (NOV)	dhi	9-10	fgik	8-9	fhi	13-14	hi	3-4	hikl
					16-17	dgik	15-16	fhi	20-21	hik	5-6	hikl
					23-24	fgik	22-23	fhik	23-24	hik	8-9	hikl
					30-31	dgik	29-30	fhik	25-26	hik	10-11	hikl
									27-28	hik	12-13	hikl
									30-31	hik	15-16	hikl
											17-18	hikl
											19-20	hikl
											22-23	hikl
											24-25	hikl
											26-27	hikl
											31-1 (NOV)	hikl

TABLE VI-1

IMPINGEMENT SAMPLING DATES (Continued)

	1972		1973		1974		1975		1976		1977	
MONTH	DATE INTERVAL	COLLEC-TION DATA	DATE INTERVAL	COLLEC-TION DATA	DATE INTERVAL	COLLEC-TION DATA	DATE INTERVAL	COLLEC-TION DATA	DATE INTERVAL	COLLEC-TION DATA	DATE INTERVAL	COLLEC-TION DATA
NOV			7-8	dhi	6-7	fgik	5-6	fhik	1-2	gik	2-3	hikl
			8	bdhik	13-14	fgk	12-13	fhik	3-4	hik	7-8	hikl
			27-28	dhi	20-21	dgik	19-20	fgk	6-7	hik	9-10	hikl
					26-27	dgik	25-26	fgik	8-9	hik	14-15	hikl
									10-11	hik	16-17	hikl
									13-14	hik	19-20	hikl
									17-18	hik	21-22	hikl
									18-19	hik	23-24	hikl
									19-20	hik	28-20	hikl
									20-21	hik	30-1	hikl
									21-22	hik	(DEC)	
									22-23	hik		
									24-25	hk		
									25-26	hikl		
									26-28	hikl		
									28-29	hikl		
									29-30	hikl		
									30-1	hikl		
									(DEC)	hikl		
DEC	7-8	ehi	5-6	dhi	4-5	fgik	3-4	fgik	1-2	hikl	3-4	hikl
	12-13	ehi	20-21	dhi	11-12	dgik	10-11	fgik	2	ahikl	5-6	hikl
	18-19	ehi			26-27	cdgik	17-18	fgik	4-5	hikl	6-7	hikl
	26-27	ehi					23	bgik	5-6	hikl	10-11	hikl
							30-31	fgik	6	ahikl	12-13	hikl
									8	ahikl	13-14	hikl
									8-9	hikl	17-18	hikl
									9-10	hikl	19-20	hikl
									10-11	hikl	21-22	hikl
									11-12	hikl	24-25	hikl
									12-13	hikl	26-27	hikl
									13-14	hikl	28-29	hikl
									14-15	hikl	31-1	hik
									15-16	hikl	(JAN)	

TABLE VI-1

IMPINGEMENT SAMPLING DATES (Continued)

MONTH	1972 DATE INTERVAL	1972 COLLECTION DATA	1973 DATE INTERVAL	1973 COLLECTION DATA	1974 DATE INTERVAL	1974 COLLECTION DATA	1975 DATE INTERVAL	1975 COLLECTION DATA	1976 DATE INTERVAL	1976 COLLECTION DATA	1977 DATE INTERVAL	1977 COLLECTION DATA
DEC (Cont)									16-17	hikl		
									17-18	hikl		
									18-19	hikl		
									19-20	hikl		
									20-21	hikl		
									21-22	hikl		
									22-23	hikl		
									25-26	hikl		
									27-28	hikl		
									29-30	hikl		

[a] Sample period less than eight hours
[b] Sample period approximately twelve hours
[c] Counts based on field counts
[d] Samples collected every two hours
[e] Samples collected every six hours
[f] Samples collected every 12 hours
[g] Screens operated continuously
[h] Intermittent wash
[i] Unit 1 sampled
[k] Unit 2 sampled
[l] Unit 1 and Unit 2 sampled separately

the remainder of 1973. The initial surveys in 1972 consisted of a collection during each tidal cycle, while surveys conducted in 1973 consisted primarily of 12 two-hour collections.

Intermittent impingement surveys were conducted from January through April 1974, and weekly throughout the remainder of the year. Surveys consisted of a variable number of collections over a 24-hour period; collection intervals of two hours (12 samples), six hours (four samples), and 12 hours (two samples) were all employed (Table VI-2).

Since 1974, impingement sampling has been performed at least once per week. Surveys during 1975 consisted mostly of two 12-hour collections, corresponding approximately to day (0800-2000 hours) and night (2000-0800 hours) collections. Beginning in May 1976, only one collection, of 24 hours' duration, was made per survey. During periods when considerable debris was impinged on the screens, additional collections were necessary to prevent overflow of the collection basket.

Sampling frequency was increased in 1976 and 1977 in order to evaluate the effectiveness of a barrier net placed in front of the intake. Throughout these two years, surveys were conducted three times weekly, except during July, August, and September, when surveys were conducted weekly.

3. Field Gear and Technique

Fish and invertebrates were collected at the screen backwash sump located inside the intake structure. An angle iron basket (63.5 x 195.8 cm) of 0.95 square cm (0.375 inch) steel mesh lined with a 0.64 square cm (0.25 inch) mesh heavy duty nylon net bag was used

TABLE VI-2

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SCREEN CLEANING AND COLLECTION PROCEDURE

BOWLINE POINT GENERATING STATION - JANUARY 1973-DECEMBER 1977

YEAR	TIME INTERVAL	SCREEN CLEANING PROCEDURE*	COLLECTION PROCEDURE*
1973	JAN-DEC	Screens washed 24 hours prior to start of the survey; basket was set, and pre-wash was performed just prior to initiation of survey to remove 24 hour accumulation of fish. Unit 2 screens were not washed although there was some flow through these screens	Collections were made every two hours utilizing a 20 minute wash and rotation of unit 1 screens.
1974	JAN-DEC	Continuous screenwash. Screens were stopped 4 hours prior to initiation of the survey. Just prior to the survey, basket was set and the screen was rotated and washed for 20 minutes to remove the 4 hour accumulation of fish. All operating traveling screens were rotated and washed during each survey	Three collection frequancies were used during the 24 hour sampling period: 2, 6 and 12 hour collections.
1975	JAN-DEC	Variable screen wash mode-either continuous wash performed as in 1974 or intermittant wash in which the screens were rotated and washed for 20 minutes every 4 hours. In either case, the screens were not washed for 4 hours prior to the survey; the basket was then set and the screens were rotated and washed for 20 minutes to remove the 4-hour accumulation of fish. All operating traveling screens were rotated and washed during each survey	Two 12 hour collections were made during each 24 hour survey unless additional collections were necessitated by heavy debris.
1976	JAN-DEC	Same as in 1975	One or two collections were made per 24 hour survey. A physical modification was made in the collection basket to allow for separation of of Unit 1 and Unit 2 samples. These samples were maintained separately for some special studies.
1977	JAN-DEC	Same as in 1975	Same as in 1976

*On occasion, individual samples varied from these generalized conditions. For specific surveys refer to Table VI-1.

to collect the sample. In 1976 a divider was placed in the screen backwash trough and the collection basket to permit separate collections on Unit 1 and Unit 2.

A prewash was used to collect any fish that might recirculate from the discharge on the northeast corner back to the traveling screens. In 1972 and 1973 the prewash consisted of a 24-hour collection prior to the scheduled impingement sampling. In subsequent surveys, a prewash sample consisted of a single screen rotation and wash following a four-hour down period. If the plant was utilizing a continuous wash mode, the screens were stopped four hours before initiation of the survey and were washed just prior to the survey.

During 1972 and most of 1973, only Unit 1 screens were washed. Although Unit 2 officially went on-line in May 1974, pumps were operated and samples collected throughout early 1974 and, on occasion, during 1973. Beginning in 1974, all operating screens were washed during each survey. It was not uncommon for one or more screens to be inoperable during any given survey.

Relevant plant operating conditions, including operating pumps and screens, screen wash mode and pressures, as well as wash times and duration, were recorded on field data records.

Water chemistry measurements were made at the Unit 1 intake in conjunction with each survey. In 1972 and 1973 water temperature, dissolved oxygen, chloride and conductivity were determined at the surface and bottom during periods of slack water. In 1974, turbidity was measured in addition to those tests performed during previous studies. The initial 1975 impingement surveys included measurements of temperature, dissolved oxygen, conductivity, turbidity and pH at the initiation of the survey, after 12 hours, and

upon the completion of the survey. Starting in September of 1975, measurements were made with each collection. If meters were not available, water samples were collected and analyzed in the laboratory.

4. Laboratory Analysis

Laboratory analysis of fish impinged during 1972 and 1973 consisted of a total count by species and length and weight determinations of the six selected species - striped bass, white perch, Atlantic tomcod, bay anchovy, blueback herring, and alewife. Sex determinations were performed on a subsample of each of these species.

In 1974 laboratory analysis was performed in two separate phases: preliminary analysis, performed on each sample, included a count and weight by species; and secondary analysis, performed on a composite of the individual collections per survey, included length, weight, and sex determinations of white perch, striped bass, pumpkinseed, sunfish, Atlantic tomcod, alewife, blueback herring, and hogchoker.

In the laboratory analysis of 1975 impingement samples, collections from alternate weeks received either full analysis (preliminary and secondary) or partial analysis (preliminary only). Preliminary analysis was performed as in 1974 while secondary analyses, performed on a composite of all samples from the survey, involved: 1) determining length and weight of up to 100 white perch and striped bass (weights were discontinued in September), 2) determining length of up to 100 Atlantic tomcod, bay anchovy, alewife, and blueback herring, and 3) as of September, determining sex of up to 100 white perch.

Laboratory analysis of impingement collections subsequent to 1975, as in 1975, included length determinations of up to 100 striped bass, white perch, Atlantic tomcod, bay anchovy, blueback herring and alewife.

Invertebrates collected with the fish were counted and a total biomass by species was determined. Up to 100 blue crabs were lengthened per impingement survey during 1976.

Laboratory procedures utilized standard analysis techniques. The wet weight was determined to the nearest tenth of a gram on a calibrated Mettler balance, and total length to the nearest millimeter was measured. Total length was defined as the distance from the snout (jaws closed) to the tip of the tail with the lobes compressed so as to give the maximum possible measurement (Hile 1948).

Sex determination was made through gonad analysis, since many species exhibit no external signs of sexual dimorphism. Male testes were generally whitish in color with few blood vessels evident. Female ovaries were usually pink to yellow with more obvious blood vessels and a granular appearance due to oocytes and eggs.

5. Analytical Methods

Impingement samples were used to estimate the total number of selected species impinged monthly at Bowline. Each month was divided into four time intervals: day 1 to 7, day 8 to 14, day 15 to 21, day 22 to the last day of the month. For each interval, the total number of fish collected was divided by the total plant flow in million cubic meters sampled within that interval to produce an impingement rate. The impingement rate (number of fish per million

cubic meters) for the four time intervals was averaged to produce a mean monthly impingement rate. When there was no sample taken within one of the four time intervals, the remaining intervals were averaged to obtain the monthly rate. The mean monthly impingement rate was then multiplied by the total monthly plant flow in million cubic meters to produce an estimated total number of fish impinged per month. The monthly totals were summed to obtain an annual total.

The impingement rate is the basic statistic for comparison between plants or between sampling periods at a single plant. For Bowline, the impingement rate has been used to evaluate seasonal and annual patterns, and the difference between day and night impingement rates (O&R 1977).

6. Special Studies

a. Screen Collection Efficiency

This special study was initiated on 27 October 1976 to investigate the collection efficiency of the traveling screens for tagged dead fish released directly in front of an operating screen. The study was performed once a week in conjunction with a regularly scheduled impingement survey.

Up to 100 dead fish, primarily Morone spp. (<10 cm), were removed from the discard wash, lengthed, and tagged with a latex dye injection. Fish were released at the surface by hand at a randomly chosen operating screen, at a location between the bar rack and the traveling screen. At screens 2 (Unit 2, B) and 5 (Unit 1, B), access was through service manholes in the floor, approximately 0.3 m from the screen face. Access to the remaining screens was through service manholes on the outside walkway, approximately 1 or 2 m from the screen face.

Two modes of screenwash operation were used, continuous and intermittent. During an intermittent wash mode, screen rotation and wash was not performed until four hours after the release of the tagged fish. Sample collections were made after 12 or 24 hours. Any pertinent observations were recorded on the field data sheets. Collection efficiency was the number recovered, divided by the number released, expressed as a percentage.

b. Intake Barrier Study

A special study was begun on 9 April 1976 to investigate the feasibility of reducing impingement by deploying a barrier net some distance in front of the intake in a reduced velocity field. The first phase of the study ran from 9 April to 8 July 1976 and utilized a 1.27 cm (0.5 inch) mesh net positioned across Units 1 and 2. The second phase began on 10 December 1976 with the positioning of a 1.27 cm (0.5 inch) mesh net across Unit 2. On 10 March 1977, a 0.95 cm (0.375 inch) mesh net was positioned across Unit 1, allowing for a comparison between the two different mesh sizes. On 17 May 1977, both nets were removed. The 0.95 cm mesh net was positioned across both Units 1 and 2 on 18 October 1977 and remained in place until June 1 1978.

C. RESULTS AND DISCUSSION

1. Abundance and Distribution

a. Species Assemblage

A total of 49 species of fish were identified in the impingement collections from the Bowline Point Generating Station during

1977 (Table VI-3). Only four species - American eel, pumpkinseed, striped bass, and white perch - were represented in every month, while 12 other species - Atlantic needlefish, black crappie, carp, crevalle Jack, fourspine stickleback, scup, sea lamprey, silver hake, squirrel hake, tidewater silverside, white crappie, and white sucker - were collected during only one month (Table VI-4).

b. Abundance and Biomass

A total of 128,530 fish (Table VI-4) weighing 778 kg (Table VI-5) were collected during 1977. The collections were dominated by white perch (50%), with rainbow smelt (11%), blueback herring (10%), gizzard shad (7%) and striped bass (6%) representing a distant second, third, fourth, and fifth, respectively (Table VI-4).

The dominant species in 1977 were essentially the same as in previous years (Table VI-6).

The total impingement rate reached a maximum in February and dropped off throughout the spring and early summer, increasing again in the fall and early winter (Table VI-7).

The total estimated number of fish impinged during 1977 was 320,513 (Table VI-7) as compared to 362,610, 659,632 and 601,525 for 1976, 1975 and 1974 respectively (Tables VI-8, 9 and 10). The average monthly impingement rate for 1977 was the lowest recorded to date, although water usage rate was the highest (Table VI-11).

TABLE VI-3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

COMMON AND SCIENTIFIC NAMES OF IMPINGED FISH
BOWLINE POINT GENERATING STATION - 1977

COMMON NAME	SCIENTIFIC NAME
ALEWIFE	ALOSA PSEUDOHARENGUS
AMERICAN EEL	ANGUILLA ROSTRATA
AMERICAN SHAD	ALOSA SAPIDISSIMA
ATLANTIC MENHADEN	BREVOORTIA TYRANNUS
ATLANTIC NEEDLEFISH	STRONGYLURA MARINA
ATLANTIC STURGEON	ACIPENSER OXYRHYNCHUS
ATLANTIC TOMCOD	MICROGADUS TOMCOD
BANDED KILLIFISH	FUNDULUS DIAPHANUS
BAY ANCHOVY	ANCHOA MITCHILLI
BLACK CRAPPIE	POXOMIS NIGROMACULATUS
BLUEBACK HERRING	ALOSA AESTIVALIS
BLUEFISH	POMATOMUS SALTATRIX
BLUEGILL	LEPOMIS MACROCHIRUS
BROWN BULLHEAD	ICTALURUS NEBULOSUS
CARP	CYPRINUS CARPIO
CENTRAL MUDMINNOW	UMBRA LIMI
CREVALLE JACK	CARANX HIPPOS
FOURSPINE STICKLEBACK	APELTES QUADRACUS
GIZZARD SHAD	DOROSOMA CEPEDIANUM
GOLDEN SHINER	NOTEMIGONUS CRYSOLEUCAS
GOLDFISH	CARASSIUS AURATUS
HERRINGS	CLUPEIDAE
HOGCHOKER	TRINECTES MACULATUS
LARGEMOUTH BASS	MICROPTERUS SALMOIDES
LOOKDOWN	SELENE VOMER
MUMMICHOG	FUNDULUS HETEROCLITUS
NORTHERN PIPEFISH	SYNGNATHUS FUSCUS
PUMPKINSEED	LEPOMIS GIBBOSUS
RAINBOW SMELT	OSMERUS MORDAX

TABLE VI-3 CONTINUED

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

COMMON AND SCIENTIFIC NAMES OF IMPINGED FISH
BOWLINE POINT GENERATING STATION - 1977

COMMON NAME	SCIENTIFIC NAME
REDBREAST SUNFISH	LEPOMIS AURITUS
ROUGH SILVERSIDE	MEMBRAS MARTINICA
SCULPINS	COTTIDAE
SCUP	STENOTOMUS CHRYSOPS
SEA LAMPREY	PETROMYZON MARINUS
SILVER HAKE	MERLUCCIUS BILINEARIS
SPOT	LEIOSTOMAS XANTHURUS
SPOTTAIL SHINER	NOTROPIS HUDSONIUS
SQUIRREL HAKE	UROPHYCIS CHUSS
STRIPED BASS	MORONE SAXATILIS
TESSELLATED DARTER	ETHEOSTOMA OLMSTEDI
THREESPINE STICKLEBACK	GASTEROSTEUS ACULEATUS
TIDEWATER SILVERSIDE	MENIDIA BERYLLINA
WARMOUTH	LEPOMIS GULOSUS
WEAKFISH	CYNOSCION REGALIS
WHITE BASS	MORONE CHRYSOPS
WHITE CATFISH	ICTALURUS CATUS
WHITE CRAPPIE	POXOMIS ANNULARIS
WHITE PERCH	MORONE AMERICANA
WHITE SUCKER	CATOSTOMUS COMMERSONI
WINTER FLOUNDER	PSEUDOPLEURONECTES AMERICANUS
YELLOW PERCH	PERCA FLAVESCENS

TABLE VI-4

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	39	0.1	0	0.0	0	0.0	0	0.0
AMERICAN EEL	58	0.2	15	0.1	18	0.2	33	1.1
AMERICAN SHAD	10	*	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	1	*	0	0.0
ATLANTIC TOMCOD	389	1.1	516	2.4	120	1.6	3	0.1
BANDED KILLIFISH	21	0.1	9	*	20	0.3	6	0.2
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	67	0.2	0	0.0	0	0.0	0	0.0
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	14	*	3	*	8	0.1	25	0.8
BROWN BULLHEAD	2	*	6	*	2	*	3	0.1
CARP	2	*	0	0.0	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	1	*	1	*
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	1	*	0	0.0	0	0.0
GIZZARD SHAD	8615	23.9	539	2.5	22	0.3	1	*
GOLDEN SHINER	1	*	19	0.1	6	0.1	0	0.0
GOLDFISH	24	0.1	7	*	1	*	2	0.1
HERRINGS	1	*	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	10	0.3
LARGEMOUTH BASS	2	*	0	0.0	0	0.0	1	*
LOCKDOWN	0	0.0	0	0.0	0	0.0	0	0.0
MUMMICHOG	3	*	1	*	11	0.1	5	0.2
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	29	0.1	17	0.1	35	0.5	56	1.8
RAINBOW SMELT	3612	10.0	7542	35.3	873	11.9	1169	38.4
REDBREAST SUNFISH	6	*	3	*	18	0.2	3	0.1
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
SCULPINS	6	*	0	0.0	0	0.0	0	0.0
SCUP	0	0.0	0	0.0	0	0.0	0	0.0
SEA LAMPREY	0	0.0	4	*	0	0.0	0	0.0
SILVER HAKE	0	0.0	0	0.0	0	0.0	0	0.0
SPOT	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	28	0.1	13	0.1	71	1.0	8	0.3
SQUIRREL HAKE	1	*	0	0.0	0	0.0	0	0.0
STRIPED BASS	2774	7.7	3122	14.6	1310	17.8	52	1.7
TESSELLATED DARTER	5	*	1	*	5	0.1	84	2.8

TABLE VI-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
THREESPINE STICKLEBACK	20	0.1	31	0.1	37	0.5	4	0.1
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE BASS	0	0.0	1	*	0	0.0	0	0.0
WHITE CATFISH	199	0.6	145	0.7	65	0.9	25	0.8
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	20110	55.8	9400	43.9	4715	64.2	1551	51.0
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
WINTER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW PERCH	0	0.0	0	0.0	2	*	0	0.0
TOTAL	36038	100.1	21395	99.9	7341	99.8	3042	99.9
MONTHLY FLOW SAMPLED (MCM)	84.9255		78.4420		85.8366		86.4595	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE VI-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	40	0.7	69	1.5	11	6.8	4209	56.6
AMERICAN EEL	53	0.9	57	1.2	4	2.5	15	0.2
AMERICAN SHAD	0	0.0	1	*	4	2.5	158	2.1
ATLANTIC MENHADEN	1	*	56	1.2	1	0.6	25	0.3
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	6	0.1
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	1432	24.9	2817	60.4	45	28.0	97	1.3
BANDED KILLIFISH	2	*	0	0.0	0	0.0	4	0.1
BAY ANCHOVY	9	0.2	73	1.6	14	8.7	1080	14.5
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	35	0.6	59	1.3	8	5.0	118	1.6
BLUEFISH	0	0.0	554	11.9	7	4.3	47	0.6
BLUEGILL	49	0.9	7	0.2	0	0.0	1	*
BROWN BULLHEAD	2	*	0	0.0	0	0.0	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	1	*	1	*	0	0.0	1	*
GOLDFISH	3	0.1	0	0.0	0	0.0	1	*
HERRINGS	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	331	5.8	58	1.2	3	1.9	109	1.5
LARGEMOUTH BASS	0	0.0	0	0.0	1	0.6	0	0.0
LOOKDOWN	0	0.0	0	0.0	0	0.0	1	*
MUMMICHOG	1	*	0	0.0	0	0.0	0	0.0
NORTHERN PIPEFISH	1	*	4	0.1	0	0.0	10	0.1
PUMPKINSEED	49	0.9	11	0.2	4	2.5	23	0.3
RAINBOW SMELT	240	4.2	23	0.5	1	0.6	1	*
REDBREAST SUNFISH	12	0.2	13	0.3	2	1.2	6	0.1
ROUGH SILVERSIDE	0	0.0	2	*	0	0.0	9	0.1
SCULPINS	0	0.0	0	0.0	0	0.0	0	0.0
SCUP	0	0.0	0	0.0	0	0.0	0	0.0
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0
SILVER HAKE	0	0.0	0	0.0	0	0.0	0	0.0
SPOT	0	0.0	0	0.0	0	0.0	120	1.6
SPOTTAIL SHINER	29	0.5	3	0.1	0	0.0	1	*
SQUIRREL HAKE	0	0.0	0	0.0	0	0.0	0	0.0
STRIPED BASS	5	0.1	6	0.1	9	5.6	179	2.4
TESSELLATED DARTER	21	0.4	3	0.1	1	0.6	4	0.1

TABLE VI-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	33	0.4
WHITE BASS	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	137	2.4	4	0.1	3	1.9	7	0.1
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	3290	57.3	839	18.0	43	26.7	1169	15.7
WHITE SUCKER	1	*	0	0.0	0	0.0	0	0.0
WINTER FLOUNDER	0	0.0	0	0.0	0	0.0	1	*
YELLOW PERCH	2	*	1	*	0	0.0	0	0.0
TOTAL	5746	100.1	4661	100.0	161	100.0	7435	99.8
MONTHLY FLOW SAMPLED (MCM)	93.2592		79.4529		64.2612		117.8625	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE VI-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	73	40.8	2729	14.5	406	4.0	76	0.6	7652	6.0
AMERICAN EEL	1	0.6	11	0.1	16	0.2	52	0.4	333	0.3
AMERICAN SHAD	1	0.6	115	0.6	1	*	1	*	291	0.2
ATLANTIC MENHADEN	C	0.0	6	*	2	*	0	0.0	91	0.1
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0	6	*
ATLANTIC STURGEON	0	0.0	0	0.0	2	*	0	0.0	3	*
ATLANTIC TOMCOD	2	1.1	12	0.1	0	0.0	2	*	5435	4.2
BANDED KILLIFISH	0	0.0	0	0.0	2	*	2	*	66	0.1
BAY ANCHOVY	29	16.2	12	0.1	1	*	5	*	1223	1.0
BLACK CRAPPIE	0	0.0	0	0.0	1	*	0	0.0	1	*
BLUEBACK HERRING	3	1.7	11968	63.6	517	5.1	17	0.1	12792	10.0
BLUEFISH	0	0.0	2	*	0	0.0	0	0.0	610	0.5
BLUEGILL	C	0.0	97	0.5	124	1.2	4	*	332	0.3
BROWN BULLHEAD	0	0.0	1	*	0	0.0	3	*	19	*
CARP	C	0.0	0	0.0	0	0.0	0	0.0	2	*
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0	2	*
CREVALLE JACK	1	0.6	0	0.0	0	0.0	0	0.0	1	*
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	1	*
GIZZARD SHAD	C	0.0	16	0.1	5	*	238	1.8	9436	7.3
GOLDEN SHINER	0	0.0	1	*	0	0.0	0	0.0	30	*
GOLDFISH	1	0.6	1	*	0	0.0	4	*	44	*
HERRINGS	C	0.0	0	0.0	0	0.0	0	0.0	1	*
HOGCHOKER	27	15.1	826	4.4	150	1.5	4	*	1518	1.2
LARGEMOUTH BASS	0	0.0	0	0.0	10	0.1	2	*	16	*
LOOKDOWN	1	0.6	0	0.0	0	0.0	0	0.0	2	*
MUMMICHOG	0	0.0	3	*	14	0.1	7	0.1	45	*
NORTHERN PIPEFISH	0	0.0	0	0.0	C	0.0	0	0.0	15	*
PUMPKINSEED	1	0.6	19	0.1	6	0.1	6	*	256	0.2
RAINBOW SMELT	C	0.0	80	0.4	48	0.5	304	2.2	13893	10.8
REDBREAST SUNFISH	C	0.0	3	*	6	0.1	1	*	73	0.1
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0	11	*
SCULPINS	C	0.0	0	0.0	0	0.0	0	0.0	6	*
SCUP	1	0.6	0	0.0	0	0.0	0	0.0	1	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0	4	*
SILVER HAKE	0	0.0	0	0.0	1	*	0	0.0	1	*
SPOT	8	4.5	20	0.1	30	0.3	3	*	181	0.1
SPOTTAIL SHINER	C	0.0	0	0.0	0	0.0	10	0.1	163	0.1
SQUIRREL HAKE	0	0.0	0	0.0	0	0.0	0	0.0	1	*
STRIPED BASS	8	4.5	239	1.3	185	1.8	383	2.8	8272	6.4
TESSELLATED DARTER	0	0.0	0	0.0	3	*	7	0.1	134	0.1

TABLE VI-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	3	*	95	0.1
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	1	*	1	*
WARMOUTH	0	0.0	0	0.0	3	*	1	*	4	*
WEAKFISH	9	5.0	33	0.2	0	0.0	2	*	77	0.1
WHITE BASS	0	0.0	17	0.1	3	*	2	*	23	*
WHITE CATFISH	0	0.0	31	0.2	11	0.1	36	0.3	663	0.5
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	1	*	1	*
WHITE PERCH	13	7.3	2563	13.6	8630	84.8	12370	91.3	64693	50.3
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0	1	*
WINTER FLOUNDER	0	0.0	1	*	0	0.0	0	0.0	2	*
YELLOW PERCH	0	0.0	1	*	0	0.0	1	*	7	*
TOTAL	179	100.4	18807	100.0	10177	99.9	13548	99.8	128530	100.0
MONTHLY FLOW SAMPLED (MCM)	86.3295		103.4411		84.0606		86.3933		1050.7239	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE VI-5

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	141	0.1	0	0.0	0	0.0	0	0.0
AMERICAN EEL	2398	1.0	1737	1.1	2934	6.2	4637	21.9
AMERICAN SHAD	34	*	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC STURGEON	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	3491	1.4	10650	6.5	2018	4.3	37	0.2
BANDED KILLIFISH	58	*	57	*	120	0.3	34	0.2
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
BLUEBACK HERRING	67	*	0	0.0	0	0.0	0	0.0
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	26	*	93	0.1	66	0.1	39	0.2
BROWN BULLHEAD	126	0.1	1348	0.8	460	1.0	329	1.6
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	5	*	4	*
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	0	0.0	1	*	0	0.0	0	0.0
GIZZARD SHAD	186197	74.1	50275	30.6	1653	3.5	43	0.2
GOLDEN SHINER	0	0.0	58	*	10	*	0	0.0
GOLDFISH	4238	1.7	2000	1.2	0	0.0	614	2.9
HERRINGS	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	0	0.0	0	0.0	0	0.0	277	1.3
LARGEMOUTH BASS	41	*	0	0.0	0	0.0	63	0.3
LOCKDOWN	0	0.0	0	0.0	0	0.0	0	0.0
MUMMICHOG	25	*	1	*	67	0.1	29	0.1
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	462	0.2	733	0.4	722	1.5	2025	9.6
RAINBOW SMELT	1122	0.4	11493	7.0	1966	4.2	2535	12.0
REDBREAST SUNFISH	57	*	131	0.1	328	0.7	11	0.1
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
SCULPINS	0	0.0	0	0.0	0	0.0	0	0.0
SCUP	0	0.0	0	0.0	0	0.0	0	0.0
SEA LAMPREY	0	0.0	15	*	0	0.0	0	0.0
SILVER HAKE	0	0.0	0	0.0	0	0.0	0	0.0
SPOT	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	67	*	63	*	231	0.5	30	0.1
SQUIRREL HAKE	0	0.0	0	0.0	0	0.0	0	0.0
STRIPED BASS	4781	1.9	21675	13.2	9940	21.0	345	1.6
TESSELLATED DARTER	7	*	2	*	14	*	293	1.4

TABLE VI-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
THREESPINE STICKLEBACK	6	*	50	*	92	0.2	10	*
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE BASS	0	0.0	9	*	0	0.0	0	0.0
WHITE CATFISH	6649	2.6	9549	5.8	7766	16.4	3334	15.8
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	41122	16.4	54467	33.1	18725	39.6	6449	30.5
WHITE SUCKER	0	0.0	0	0.0	0	0.0	0	0.0
WINTER FLOUNDER	0	0.0	0	0.0	0	0.0	0	0.0
YELLOW PERCH	0	0.0	0	0.0	175	0.4	0	0.0
TOTAL (KG.)	251.1	99.9	164.4	99.9	47.3	100.0	21.1	100.0
MONTHLY FLOW SAMPLED (MCM)	84.9255		78.4420		85.8366		86.4595	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS
(MCM) Million cubic meters, all units combined

TABLE VI-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	2744	6.1	4032	7.6	7	0.2	5465	20.6
AMERICAN EEL	6760	15.0	3837	7.2	403	11.C	827	3.1
AMERICAN SHAD	0	0.0	35	0.1	3	0.1	243	0.9
ATLANTIC MENHADEN	C	0.C	6585	12.4	307	8.4	735	2.8
ATLANTIC NEEDLEFISH	C	0.0	0	0.0	0	0.0	24	0.1
ATLANTIC STURGEON	C	0.0	0	C.0	0	0.C	0	0.0
ATLANTIC TOMCOD	787	1.7	3541	6.7	441	12.1	355	1.3
BANDED KILLIFISH	13	*	0	C.C	0	0.C	24	0.1
BAY ANCHOVY	25	0.1	127	0.2	15	0.4	1617	6.1
BLACK CRAPPIE	C	0.0	0	0.0	0	C.C	0	0.0
BLUEBACK HERRING	1564	3.5	2670	5.0	1	*	274	1.0
BLUEFISH	C	0.0	450	0.8	39	1.1	116	0.4
BLUEGILL	96	0.2	25	*	0	0.0	16	0.1
BROWN BULLHEAD	428	0.9	0	0.0	0	0.C	0	0.0
CARP	C	0.0	0	0.0	0	C.C	0	0.0
CENTRAL MUDMINNOW	C	0.0	C	C.0	0	0.C	0	0.0
CREVALLE JACK	C	0.0	0	0.0	0	0.0	0	0.0
FOURSPINE STICKLEBACK	C	0.C	0	0.0	0	0.C	0	0.0
GIZZARD SHAD	C	0.0	0	0.0	0	0.C	0	0.0
GOLDEN SHINER	123	0.3	C	0.0	0	0.C	0	0.0
GOLDFISH	1380	3.1	0	0.0	0	0.C	0	0.0
HERRINGS	C	0.0	0	0.0	0	C.C	C	0.0
HOGCHOKER	6490	14.4	740	1.4	59	1.6	3231	12.2
LARGEMOUTH BASS	C	0.0	0	0.0	0	0.C	0	0.0
LOOKDOWN	0	0.0	0	0.0	0	0.0	7	*
MUMMICHOG	11	*	0	C.0	0	0.C	0	0.0
NORTHERN PIPEFISH	1	*	6	*	0	0.C	6	*
PUMPKINSEED	1604	3.6	259	0.5	155	4.2	430	1.6
RAINBOW SMELT	630	1.4	190	0.4	4	0.1	4	*
REDBREAST SUNFISH	366	0.8	333	0.6	37	1.C	121	0.5
ROUGH SILVERSIDE	C	C.0	4	*	0	0.C	26	0.1
SCULPINS	0	0.0	C	0.0	0	0.C	0	0.0
SCUP	0	0.0	0	0.0	0	0.C	0	0.0
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0
SILVER HAKE	C	0.0	0	0.0	0	0.0	0	0.0
SPOT	C	0.0	0	0.0	0	C.C	2371	9.0
SPOTTAIL SHINER	126	0.3	12	*	0	0.C	7	*
SQUIRREL HAKE	0	0.0	0	0.0	0	0.0	0	0.0
STRIPED BASS	453	1.0	970	1.8	11	0.3	737	2.8
TESSELLATED DARTER	66	0.1	7	*	4	0.1	12	*

TABLE VI-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
THREESPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	29	0.1
WHITE BASS	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	2807	6.2	80	0.2	373	10.2	880	3.3
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0
WHITE PERCH	18286	40.6	29177	54.9	1802	49.2	8932	33.7
WHITE SUCKER	186	0.4	0	0.0	0	0.0	0	0.0
WINTER FLOUNDER	0	0.0	0	0.0	0	0.0	1	*
YELLOW PERCH	113	0.3	97	0.2	0	0.0	0	0.0
TOTAL (KG.)	45.1	100.0	53.2	100.0	3.7	100.0	26.5	99.8
MONTHLY FLOW SAMPLED (MCM)	93.2592		79.4529		64.2612		117.8625	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS
(MCM) Million cubic meters, all units combined

TABLE VI-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	139	6.9	6077	15.6	1014	2.2	176	0.2	19.80	2.5
AMERICAN EEL	39	2.0	603	1.5	2173	4.6	6142	7.9	32.49	4.2
AMERICAN SHAD	2	0.1	353	0.9	4	*	11	*	.68	0.1
ATLANTIC MENHADEN	0	0.0	140	0.4	51	0.1	0	0.0	7.82	1.0
ATLANTIC NEEDLEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.02	*
ATLANTIC STURGEON	0	0.0	0	0.0	308	0.7	0	0.0	.31	*
ATLANTIC TOMCOD	7	0.3	41	0.1	0	0.0	123	0.2	21.49	2.8
BANDED KILLIFISH	0	0.0	0	0.0	4	*	10	*	.32	*
BAY ANCHOVY	69	3.4	10	*	5	*	4	*	1.87	0.2
BLACK CRAPPIE	0	0.0	0	0.0	5	*	0	0.0	.00	*
BLUEBACK HERRING	3	0.1	10464	26.8	526	1.1	23	*	15.59	2.0
BLUEFISH	0	0.0	57	0.1	0	0.0	0	0.0	.66	0.1
BLUEGILL	0	0.0	274	0.7	479	1.0	11	*	1.12	0.1
BROWN BULLHEAD	0	0.0	110	0.3	0	0.0	401	0.5	3.20	0.4
CARP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
CENTRAL MUDMINNOW	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
CREVALLE JACK	2	0.1	0	0.0	0	0.0	0	0.0	.00	*
FOURSPINE STICKLEBACK	0	0.0	0	0.0	0	0.0	0	0.0	.00	*
GIZZARD SHAD	0	0.0	80	0.2	84	0.2	2028	2.6	240.36	30.9
GOLDEN SHINER	0	0.0	0	0.0	0	0.0	0	0.0	.19	*
GOLDFISH	456	22.7	464	1.2	0	0.0	1051	1.4	10.20	1.3
HERRINGS	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
HOGCHOKER	109	5.4	5546	14.2	1634	3.5	47	0.1	18.13	2.3
LARGEMOUTH BASS	0	0.0	0	0.0	56	0.1	132	0.2	.29	*
LOCKDOWN	9	0.4	0	0.0	0	0.0	0	0.0	.02	*
MUMMICHOG	0	0.0	16	*	88	0.2	31	*	.27	*
NORTHERN PIPEFISH	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
PUMPKINSEED	83	4.1	605	1.5	75	0.2	260	0.3	7.41	1.0
RAINBOW SMELT	0	0.0	512	1.3	158	0.3	578	0.7	19.19	2.5
REDBREAST SUNFISH	0	0.0	93	0.2	37	0.1	1	*	1.52	0.2
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0	.03	*
SCULPINS	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
SCUP	133	6.7	0	0.0	0	0.0	0	0.0	.13	*
SEA LAMPREY	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
SILVER HAKE	0	0.0	0	0.0	3	*	0	0.0	.00	*
SPOT	271	13.5	550	1.4	933	2.0	63	0.1	4.19	0.5
SPOTTAIL SHINER	0	0.0	0	0.0	0	0.0	46	0.1	.58	0.1
SQUIRREL HAKE	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
STRIPED BASS	9	0.5	588	1.5	491	1.0	2239	2.9	42.24	5.4
TESSELLATED DARTER	0	0.0	0	0.0	6	*	20	*	.43	0.1

TABLE VI-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
BOWLINE POINT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
THREESPINE STICKLEBACK	C	C.0	0	C.0	0	0.C	6	*	.16	*
TIDEWATER SILVERSIDE	0	0.0	0	0.0	0	0.0	2	*	.00	*
WARMOUTH	C	C.0	0	0.0	86	0.2	17	*	.10	*
WEAKFISH	17	0.8	207	0.5	0	0.C	0	*	.25	*
WHITE BASS	C	0.0	103	0.3	18	*	13	*	.14	*
WHITE CATFISH	C	0.0	1755	4.5	97	0.2	1997	2.6	35.29	4.5
WHITE CRAPPIE	0	0.0	0	0.0	0	C.C	1	*	.00	*
WHITE PERCH	658	32.8	10341	26.5	38438	82.2	62007	80.0	290.40	37.3
WHITE SUCKER	C	0.0	0	0.0	0	0.C	0	0.0	.19	*
WINTER FLOUNDER	C	0.0	29	0.1	0	0.C	0	0.0	.03	*
YELLOW PERCH	0	0.0	0	0.0	0	0.0	87	0.1	.47	0.1
TOTAL (KG.)	2.C	99.8	39.0	99.8	46.8	99.9	77.5	99.	777.65	99.6
MONTHLY FLOW SAMPLED (MCM)	86.3295		103.4411		84.0606		86.3933		1050.7239	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS
(MCM) Million cubic meters, all units combined

TABLE VI-6

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

RELATIVE RANKING OF THE TEN MOST ABUNDANT
FISH SPECIES IN IMPINGEMENT COLLECTIONS

BOWLINE POINT GENERATING STATION - 1973-1977

RANK	1973	1974	1975	1976	1977
1	White perch	White perch	White perch	White perch	White perch
2	Alewife	Striped bass	Rainbow smelt	Striped bass	Rainbow smelt
3	Blueback herring	Blueback herring	Striped bass	Rainbow smelt	Blueback herring
4	Atlantic tomcod	Alewife	Blueback herring	Blueback herring	Gizzard shad
5	Weakfish	Atlantic tomcod	Atlantic tomcod	Gizzard shad	Striped bass
6	Striped bass	Hogchoker	Alewife	Atlantic tomcod	Alewife
7	Bay anchovy	Rainbow smelt	Gizzard shad	Alewife	Atlantic tomcod
8	Hogchoker	American shad	Bluefish	Tessellated darter	Hogchoker
9	Bluefish	Bluefish	Hogchoker	Hogchoker	Bay anchovy
10	White catfish	Bay anchovy	Bay anchovy	Bay anchovy	White catfish

TABLE VI-7

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	5061	16.8227	300.8435	19.6105	5900	
	2	18565	19.5619	949.0387	17.6854	16788	
	3	8930	14.0464	635.7501	19.6105	12467	
	4	3482	11.2644	309.1154	28.0151	8660	
			MONTH EST.RATE	548.6869	84.9255		46598
FEB	1	4367	7.0329	620.9387	19.6105	12177	
	2	4225	8.4493	500.0414	19.6105	9806	
	3	9419	8.4006	1121.2294	19.6105	21988	
	4	3384	7.0038	483.1663	19.6105	9475	
			MONTH EST.RATE	681.3440	78.4420		53446
MARCH	1	2666	6.9493	383.6358	17.4258	6685	
	2	1775	8.2858	214.2219	19.6105	4201	
	3	1937	9.0212	214.7165	20.7852	4463	
	4	963	8.4823	113.5305	28.0151	3181	
			MONTH EST.RATE	231.5262	85.8366		19873
APRIL	1	783	3.9980	195.8479	19.6105	3841	
	2	(NO SAMPLE)			19.6105		
	3	1169	5.7985	201.6039	19.6105	3954	
	4	1090	12.6532	86.1442	27.6280	2380	
			MONTH EST.RATE	161.1987	86.4595		13937
MAY	1	487	9.0671	53.7107	21.0308	1130	
	2	822	8.9470	91.8744	19.9196	1830	
	3	2799	8.4138	332.6678	20.7317	6897	
	4	1638	12.3550	132.5779	31.5771	4186	
			MONTH EST.RATE	152.7077	93.2592		14241
JUNE	1	1618	8.5648	188.9128	20.3253	3840	
	2	2441	8.7828	277.9296	21.3930	5946	
	3	376	8.5399	44.0286	21.2188	934	
	4	226	7.5101	30.0928	16.5158	497	
			MONTH EST.RATE	135.2410	79.4529		10745
JULY	1	44	2.0930	21.0225	14.6507	308	
	2	26	2.0857	12.4658	14.6507	183	
	3	32	1.9816	16.1486	14.3767	232	
	4	59	1.9919	29.6200	20.5831	610	
			MONTH EST.RATE	19.8142	64.2612		1273
AUG	1	536	3.6431	147.1275	24.9190	3666	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-7 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLING POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	2452	4.1568	589.8768	28.5625	16848	
		3	2550	4.1423	615.6000	28.0580	17273	
		4	1897	7.9057	239.9535	36.3230	8716	
				MONTH EST.RATE	398.1395	117.8625		46926
	SEPT	1	(NO SAMPLE)			29.0041		
		2	155	3.7331	41.5205	24.7263	1027	
		3	24	1.7223	13.9349	17.1065	238	
		4	(NO SAMPLE)			15.4926		
				MONTH EST.RATE	27.7277	86.3295		2394
	OCT	1	2783	8.7103	319.5068	21.7789	6959	
		2	4101	10.2383	400.5548	24.1126	9658	
		3	10012	10.2813	973.8068	24.1126	23481	
		4	1911	13.5441	141.0947	33.4370	4718	
				MONTH EST.RATE	458.7408	103.4411		47453
	NOV	1	146	5.5641	26.2396	19.6260	515	
		2	3396	5.6322	602.9615	19.6105	11824	
		3	3115	8.4045	370.6348	19.6105	7268	
		4	3520	8.4142	418.3404	25.2136	10548	
				MONTH EST.RATE	354.5441	84.0606		29803
	DEC	1	2880	8.4026	342.7511	19.6105	6722	
		2	5072	8.1935	619.0273	19.1572	11859	
		3	3406	8.2897	410.8713	19.6105	8057	
		4	2190	11.3228	193.4151	28.0151	5419	
				MONTH EST.RATE	391.5162	86.3933		33824
				ANNUAL EST.RATE	296.7656			320513

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-8

ORANGE AND ROCKLAND UTILITIES, INC.
1976 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	447	1.3862	322.4643	14.0777	4540	
	2	299	1.4640	204.2350	9.8053	2003	
	3	160	1.4251	112.2728	9.8053	1101	
	4	271	1.4251	190.1621	14.0075	2664	
			MONTH EST.RATE	207.2836	47.6958		9887
FEB	1	186	1.3473	138.0539	9.8053	1354	
	2	250	1.3764	181.6333	9.8053	1781	
	3	551	1.4348	384.0257	9.8053	3765	
	4	190	1.3570	140.0147	10.7058	1499	
			MONTH EST.RATE	210.9319	40.1217		8463
MARCH	1	875	1.3910	629.0439	9.8053	6168	
	2	512	1.3959	366.7885	9.8053	3596	
	3	341	1.3910	245.1474	9.8053	2404	
	4	2733	7.6749	356.0958	23.8567	8495	
			MONTH EST.RATE	399.2689	53.2726		21270
APRIL	1	2094	2.8015	747.4567	19.6105	14658	
	2	2279	2.8015	813.4928	19.6105	15953	
	3	32532	16.8223	1933.8616	18.6078	35985	
	4	5454	12.1729	448.0444	25.2136	11297	
			MONTH EST.RATE	985.7139	83.0424		81856
MAY	1	559	4.0466	138.1407	19.6105	2709	
	2	84	4.0797	20.5898	19.6105	404	
	3	135	5.4863	24.6068	19.6105	483	
	4	195	5.6225	34.6821	28.0151	972	
			MONTH EST.RATE	54.5049	86.8466		4734
JUNE	1	756	5.5641	135.8710	19.6105	2664	
	2	159	4.1342	38.4597	19.6105	754	
	3	226	6.9292	32.6156	19.6304	640	
	4	188	6.9013	27.2412	28.9654	789	
			MONTH EST.RATE	58.5469	87.8168		5141
JULY	1	11	1.6593	6.6293	24.1126	160	
	2	43	1.7702	24.2910	23.9956	583	
	3	189	3.4088	55.4447	23.4694	1301	
	4	139	3.4805	39.9368	34.4465	1376	
			MONTH EST.RATE	31.5755	106.0241		3348
AUG	1	582	3.4447	168.9552	24.1126	4074	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-8 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1976 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	2279	3.4207	666.2379	24.1126	16065	
		3	358	3.4447	103.9278	22.3902	2327	
		4	42	2.7307	15.3807	24.9106	383	
				MONTH EST.RATE	238.6254	95.5260		22795
	SEPT	1	135	2.7117	49.7843	19.4238	967	
		2	258	3.4447	74.8977	24.1126	1806	
		3	105	3.4566	30.3767	24.1126	732	
		4	195	6.2781	31.0604	31.0019	963	
				MONTH EST.RATE	46.5298	98.6509		4590
	OCT	1	3	1.7403	1.7238	9.8615	17	
		2	1	1.7104	.5847	12.0563	7	
		3	17	1.4008	12.1359	10.0241	122	
		4	68	5.6390	12.0589	14.0075	169	
				MONTH EST.RATE	6.6258	45.9494		304
	NOV	1	403	4.1682	96.6844	9.8053	948	
		2	518	4.2071	123.1252	9.8053	1207	
		3	102	6.9940	14.5839	9.8053	143	
		4	51823	21.8560	2371.1109	24.5772	58275	
				MONTH EST.RATE	651.3761	53.9931		35170
	DEC	1	15820	10.4381	1515.6015	20.0527	30392	
		2	26255	20.0969	1306.4204	19.6105	25620	
		3	37856	19.6105	1930.3944	19.6105	37856	
		4	31583	11.2352	2811.0759	28.0151	78753	
				MONTH EST.RATE	1890.8731	87.2888		165052
				ANNUAL EST.RATE	398.4880			362610

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-9

ORANGE AND ROCKLAND UTILITIES, INC.
1975 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	37813	6.8327	5534.1227	20.6968	115645	
	2	5442	2.7431	1983.8868	18.2098	36126	
	3	1048	2.8988	361.5289	19.6105	7090	
	4	8147	5.7100	1426.7951	34.1740	48759	
			MONTH EST.RATE	2326.5834	92.8911		216119
FEB	1	450	3.4925	128.8475	19.6105	2527	
	2	350	3.6549	95.7619	19.6105	1878	
	3	1057	1.8092	584.2361	19.6105	11457	
	4	(NO SAMPLE)			16.8090		
			MONTH EST.RATE	269.6152	75.6405		20394
MARCH	1	1014	2.6979	375.8479	14.3348	5388	
	2	1967	2.9280	671.7896	19.3862	13023	
	3	3006	2.8015	1072.9966	19.6105	21042	
	4	2511	2.8015	896.3056	28.0151	25110	
			MONTH EST.RATE	754.2349	81.3466		61354
APRIL	1	2004	2.8501	703.1332	19.6105	13789	
	2	3770	2.8015	1345.7077	19.6105	26390	
	3	8600	2.8015	3069.7640	19.6105	60200	
	4	28063	4.3871	6396.7085	25.2136	161284	
			MONTH EST.RATE	2878.8334	84.0451		241952
MAY	1	(NO SAMPLE)			20.3184		
	2	1653	2.8939	571.2015	10.4484	5968	
	3	212	1.4008	151.3421	9.8053	1484	
	4	65	1.3862	46.8908	14.0075	657	
			MONTH EST.RATE	256.4781	54.5796		13998
JUNE	1	208	1.0992	189.2285	16.5747	3136	
	2	377	2.7821	135.5092	19.6105	2657	
	3	1154	2.6673	432.6473	19.6105	8484	
	4	326	2.8015	116.3662	25.5351	2971	
			MONTH EST.RATE	218.4378	81.3308		17766
JULY	1	254	2.8015	90.6657	19.6105	1778	
	2	140	2.7529	50.8555	19.6105	997	
	3	645	2.7918	231.0337	20.2537	4679	
	4	2063	7.0001	294.7101	34.3319	10118	
			MONTH EST.RATE	166.8163	93.8066		15648
AUG	1	58	3.4447	16.8375	24.1126	406	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-9 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1975 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	(NO SAMPLE)			24.1126		
		3	66	3.3490	19.7074	24.0628	474	
		4	52	3.3729	15.4170	33.2883	513	
				MONTH EST.RATE	17.3206	105.5763		1829
	SEPT	1	23	3.4686	6.6309	24.1126	160	
		2	55	3.4461	15.9601	23.5467	376	
		3	66	3.3968	19.4301	24.1126	469	
		4	55	3.4447	15.9666	31.0019	495	
				MONTH EST.RATE	14.4969	102.7738		1490
	OCT	1	152	3.4207	44.4354	18.0916	804	
		2	15	1.7223	8.7093	12.0563	105	
		3	2	1.7044	1.1734	12.0563	14	
		4	110	3.4865	31.5503	15.3165	483	
				MONTH EST.RATE	21.4671	57.5207		1235
	NOV	1	933	1.7522	532.4735	12.0563	6420	
		2	722	1.7343	416.3063	12.0563	5019	
		3	41	1.7223	23.8054	12.0563	287	
		4	145	1.7044	85.0739	15.5009	1319	
				MONTH EST.RATE	264.4148	51.6698		13662
	DEC	1	202	1.7462	115.6798	12.0563	1395	
		2	1396	3.8153	365.8952	22.3860	8191	
		3	478	3.3538	142.5249	24.1126	3437	
		4	8372	4.5672	1833.0706	29.6528	54356	
				MONTH EST.RATE	614.2926	88.2077		54185
				ANNUAL EST.RATE	650.2493			659632

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-10

ORANGE AND ROCKLAND UTILITIES, INC.
1974 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2239	1.7223	1300.0058	12.0563	15673	
	2	(NO SAMPLE)			12.0563		
	3	4850	1.7223	2816.0019	12.1181	34125	
	4	585	1.7223	339.6621	17.2233	5850	
			MONTH EST.RATE	1485.2233	53.4540		79391
FEB	1	(NO SAMPLE)			12.0563		
	2	2572	1.7223	1493.3519	12.0563	18004	
	3	(NO SAMPLE)			12.0563		
	4	(NO SAMPLE)			2.3603		
			MONTH EST.RATE	1493.3519	38.5292		57538
MARCH	1	5196	1.7223	3016.8960	12.0563	36373	
	2	2284	1.7223	1326.1337	12.0563	15988	
	3	2052	1.7223	1191.4301	12.0563	14364	
	4	(NO SAMPLE)			17.1694		
			MONTH EST.RATE	1844.8199	53.3383		98400
APRIL	1	6657	2.6825	2481.6403	19.2187	47694	
	2	(NO SAMPLE)			15.0888		
	3	1267	1.7223	735.6442	12.0533	8867	
	4	(NO SAMPLE)			15.3213		
			MONTH EST.RATE	1608.6423	61.6821		99224
MAY	1	498	1.7223	289.1482	12.0563	3486	
	2	350	1.7223	226.4414	12.1031	2741	
	3	1078	1.7223	625.9072	7.5739	4741	
	4	(NO SAMPLE)			.0000		
			MONTH EST.RATE	380.4989	31.7333		12074
JUNE	1	416	3.5303	117.8370	9.8447	1160	
	2	408	3.4447	118.4428	16.0643	1903	
	3	192	3.5882	53.5087	22.0443	1180	
	4	1013	3.3011	306.8674	28.9886	8896	
			MONTH EST.RATE	149.1640	76.9419		11477
JULY	1	175	3.0141	58.0605	22.6486	1315	
	2	780	3.3729	231.2550	19.7537	4568	
	3	92	3.4375	26.7636	24.1126	645	
	4	316	3.3011	95.7257	34.4465	3297	
			MONTH EST.RATE	102.9512	100.9614		10394
AUG	1	360	6.8175	52.8053	24.1919	1277	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-11 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1974 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW (MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW (MCM)	EST. NO. (RATE X FLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	(NO SAMPLE)			22.2001		
		3	(NO SAMPLE)			24.1126		
		4	377	7.4981	50.2794	37.8942	1905	
				MONTH EST. RATE	51.5424	108.3968		5587
	SEPT	1	502	3.6563	137.2973	25.0872	3444	
		2	(NO SAMPLE)			26.7070		
		3	223	4.0115	55.5902	28.4074	1579	
		4	43	4.2440	10.1320	37.6732	382	
				MONTH EST. RATE	67.6732	117.8748		7977
	OCT	1	32	3.8371	8.3396	29.3014	244	
		2	417	4.1423	100.6687	29.3014	2950	
		3	4923	4.0987	1201.1126	29.3014	35194	
		4	2414	8.1683	295.5327	38.1665	11280	
				MONTH EST. RATE	401.4134	126.0727		50607
	NOV	1	1031	3.5428	291.0128	23.4780	6832	
		2	258	1.7140	150.5251	15.5009	2333	
		3	4645	3.2652	1422.5775	17.2223	24501	
		4	4431	3.3609	1318.3969	31.0019	40873	
				MONTH EST. RATE	795.6281	87.2041		69382
	DEC	1	7207	3.4447	2092.1996	24.1126	50448	
		2	3049	3.0021	1015.6224	24.1126	24489	
		3	1499	3.7437	400.4060	24.1126	9655	
		4	743	3.3107	224.4238	34.2606	7689	
				MONTH EST. RATE	933.1630	106.5984		99474
				ANNUAL EST. RATE	776.1726			601525

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-11

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

AVERAGE MONTHLY CIRCULATING WATER FLOW AND IMPINGEMENT RATE OF FISH

BOWLINE POINT GENERATING STATION - 1973-1977

YEAR	AVERAGE MONTHLY TOTAL PLANT FLOW (MCM)	AVERAGE MONTHLY IMPINGEMENT RATE (NO./MCM)			
		ALL SPECIES	WHITE PERCH	STRIPED BASS	ATLANTIC TOMCOD
1973[a]	50.8673	322.7474	175.7359	16.2888	19.1142
1974[b]	80.2324	776.1726	503.2865	132.5060	13.1560
1975	80.7824	650.2493	354.1735	79.0771	16.1956
1976	73.8524	398.4880	299.3998	29.3556	4.4308
1977	87.5603	296.7656	144.5199	18.8806	12.7586

[a]Only 1 unit operating in 1973
[b]Both units operating after June 1974
MCM - Million cubic meters

c. Selected Species

(i) White Perch

(a) Impingement Estimates

The estimated number of white perch impinged each month and in total for 1977 at Bowline Point Generating Station is presented in Table VI-12. The yearly total was 149,628 fish, most of which were impinged during January, February, March, November and December. Over the past three years during which both Unit 1 and 2 have been in regular operation, the impingement rate for white perch has been decreasing (Table VI-11). This is most likely related to the special study utilizing deployment of the barrier net in front of the intake, rather than to any changes in the white perch population (see Section VI-C, 2b).

(b) Size Distribution

Length frequency data for impinged white perch indicate that throughout the first six months of 1977, yearling (those fish spawned during the preceding summer) fish dominated the impingement collections (Table VI-13). There was, however, a significant contingent of larger fish caught, especially during June. Recruitment of the 1977 year class (juveniles) into the impingement collections first occurred in July with subsequent collections being dominated by young-of-the-year. The monthly mean lengths of white perch impinged during 1977 fall within the ranges from previous years (Table VI-14).

TABLE VI-12

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2694	16.8227	160.1408	19.6105	3140	
	2	12175	19.5619	622.3833	17.6894	11010	
	3	3780	14.0464	269.1081	19.6105	5277	
	4	1461	11.2644	129.7007	28.0151	3634	
			MONTH EST.RATE	295.3332	84.9255		25081
FEB	1	2613	7.0329	371.5395	19.6105	7286	
	2	1583	8.4493	187.3528	19.6105	3674	
	3	3179	8.4006	378.4254	19.6105	7421	
	4	2025	7.0038	289.1288	19.6105	5670	
			MONTH EST.RATE	306.6116	78.4420		24051
MARCH	1	1651	6.9493	237.5779	17.4258	4140	
	2	1091	8.2858	131.6711	19.6105	2582	
	3	1437	9.0212	159.2915	20.7852	3311	
	4	536	8.4823	63.1904	28.0151	1770	
			MONTH EST.RATE	147.9327	85.8366		12698
APRIL	1	426	3.9980	106.5533	19.6105	2090	
	2	(NO SAMPLE)			19.6105		
	3	533	5.7985	91.9203	19.6105	1803	
	4	592	12.6532	46.7866	27.6280	1293	
			MONTH EST.RATE	81.7534	86.4595		7068
MAY	1	270	9.0671	29.7780	21.0308	626	
	2	498	8.9470	55.6611	19.9196	1109	
	3	2000	8.4138	237.7047	20.7317	4928	
	4	522	12.3550	42.2501	31.5771	1334	
			MONTH EST.RATE	91.3485	93.2592		8519
JUNE	1	365	8.5648	42.6163	20.3253	866	
	2	293	8.7828	33.3607	21.3930	714	
	3	115	8.5399	13.4662	21.2188	286	
	4	66	7.5101	8.7882	16.5158	145	
			MONTH EST.RATE	24.5579	79.4529		1951
JULY	1	15	2.0930	7.1668	14.6507	105	
	2	8	2.0857	3.8356	14.6507	56	
	3	6	1.9816	3.0279	14.3767	44	
	4	14	1.9919	7.0285	20.5831	145	
			MONTH EST.RATE	5.2647	64.2612		338
AUG	1	104	3.6431	28.5471	24.9190	711	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-12 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	367	4.1568	88.2891	28.5625	2522	
		3	525	4.1423	126.7412	28.0580	3556	
		4	173	7.9057	21.8830	36.3230	795	
				MONTH EST.RATE	66.3651	117.8625		7822
	SEPT	1	(NO SAMPLE)			29.0041		
		2	12	3.7331	3.2145	24.7263	79	
		3	1	1.7223	.5806	17.1065	10	
		4	(NO SAMPLE)			15.4926		
				MONTH EST.RATE	1.8976	86.3295		164
	OCT	1	187	8.7103	21.4688	21.7789	468	
		2	124	10.2383	12.1114	24.1126	292	
		3	1574	10.2813	153.0935	24.1126	3691	
		4	678	13.5441	50.0587	33.4370	1674	
				MONTH EST.RATE	59.1831	103.4411		6122
	NOV	1	41	5.5641	7.3687	19.6260	145	
		2	2547	5.6322	452.2212	19.6105	8868	
		3	2785	8.4045	331.8460	19.6105	6508	
		4	3253	8.4142	386.6084	25.2136	9748	
				MONTH EST.RATE	294.5111	84.0606		24757
	DEC	1	2767	8.4026	329.3028	19.6105	6458	
		2	4781	8.1935	583.5113	19.1572	11178	
		3	3071	8.2897	370.4597	19.6105	7265	
		4	1751	11.3228	154.6437	28.0151	4332	
				MONTH EST.RATE	359.4794	86.3933		31057
				ANNUAL EST.RATE	144.5199			149628

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-13

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF WHITE PERCH
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	19	4.8	14	3.5	14	1.7	0	.0	2	.4	0	.0
5.1- 6.0	173	43.3	164	41.0	311	37.4	105	25.0	140	29.2	1	.3
6.1- 7.0	136	34.0	169	42.3	375	45.1	253	60.2	246	51.4	32	10.0
7.1- 8.0	13	3.3	23	5.8	91	11.0	46	11.0	26	5.4	22	6.9
8.1- 9.0	2	.5	0	.0	4	.5	1	.2	2	.4	1	.3
9.1- 10.0	0	.0	0	.0	2	.2	0	.0	2	.4	2	.6
10.1- 11.0	4	1.0	2	.5	3	.4	0	.0	3	.6	13	4.1
11.1- 12.0	9	2.3	3	.8	4	.5	0	.0	1	.2	17	5.3
12.1- 13.0	4	1.0	2	.5	3	.4	2	.5	4	.8	22	6.9
13.1- 14.0	0	.0	1	.3	1	.1	2	.5	6	1.3	14	4.4
14.1- 15.0	4	1.0	2	.5	3	.4	3	.7	14	2.9	21	6.6
15.1- 16.0	5	1.3	4	1.0	5	.6	4	1.0	4	.8	25	7.8
16.1- 17.0	9	2.3	5	1.3	4	.5	0	.0	15	3.1	39	12.2
17.1- 18.0	3	.8	4	1.0	3	.4	1	.2	7	1.5	47	14.7
18.1- 19.0	9	2.3	1	.3	4	.5	1	.2	5	1.0	45	14.1
19.1- 20.0	8	2.0	3	.8	3	.4	2	.5	2	.4	14	4.4
20.1- 21.0	0	.0	1	.3	1	.1	0	.0	0	.0	3	.9
21.1- 22.0	1	.3	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	1	.3	2	.5	0	.0	0	.0	0	.0	1	.3
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	400		400		831		420		479		319	
MEAN LENGTH	7.4		6.8		6.6		6.7		7.5		14.3	
VARIANCE	13.74		8.04		4.04		3.42		10.21		17.52	

TABLE VI-13 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF WHITE PERCH
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	6	15.4	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	5	12.8	124	28.4	0	.0	9	1.7	7	1.4	3	.6
5.1- 6.0	0	.0	196	45.0	1	10.0	111	21.5	72	14.4	42	8.4
6.1- 7.0	0	.0	34	7.8	0	.0	272	52.7	190	38.0	178	35.6
7.1- 8.0	0	.0	3	.7	0	.0	101	19.6	169	33.8	196	39.2
8.1- 9.0	0	.0	4	.9	0	.0	11	2.1	48	9.6	73	14.6
9.1- 10.0	0	.0	5	1.1	0	.0	1	.2	5	1.0	2	.4
10.1- 11.0	0	.0	4	.9	0	.0	1	.2	1	.2	3	.6
11.1- 12.0	0	.0	2	.5	0	.0	1	.2	0	.0	0	.0
12.1- 13.0	3	7.7	0	.0	0	.0	0	.0	2	.4	2	.4
13.1- 14.0	0	.0	2	.5	0	.0	0	.0	0	.0	1	.2
14.1- 15.0	1	2.6	3	.7	0	.0	1	.2	1	.2	0	.0
15.1- 16.0	1	2.6	2	.5	0	.0	1	.2	4	.8	0	.0
16.1- 17.0	2	5.1	9	2.1	1	10.0	2	.4	0	.0	0	.0
17.1- 18.0	9	23.1	12	2.8	2	20.0	0	.0	0	.0	0	.0
18.1- 19.0	5	12.8	13	3.0	4	40.0	1	.2	1	.2	0	.0
19.1- 20.0	3	7.7	11	2.5	0	.0	2	.4	0	.0	0	.0
20.1- 21.0	4	10.3	5	1.1	1	10.0	2	.4	0	.0	0	.0
21.1- 22.0	0	.0	1	.2	1	10.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	4	.9	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	1	.2	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	1	.2	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	39		436		10		516		500		500	
MEAN LENGTH	13.8		7.4		17.1		6.8		7.1		7.2	
VARIANCE	41.23		22.67		20.43		2.93		1.82		.91	

TABLE VI-14

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN LENGTH OF WHITE PERCH IN IMPINGEMENT COLLECTIONS

BOWLINE POINT GENERATING STATION - JANUARY-DECEMBER 1974-1977

	MONTHLY MEAN LENGTH (cm)					
YEAR	JAN	FEB	MAR	APR	MAY	JUN
1974	8.4	10.0	9.2	8.4	7.2	10.1
1975	8.6	8.9	8.7	8.3	9.9	14.6
1976	7.2	7.3	7.3	7.3	7.0	10.4
1977	7.4	6.8	6.6	6.7	7.5	14.3

	MONTHLY MEAN LENGTH (cm)					
YEAR	JUL	AUG	SEP	OCT	NOV	DEC
1974	15.6	13.0	11.2	7.4	7.3	7.1
1975	5.6	9.3	7.3	7.9	6.4	6.7
1976	18.1*	6.0	6.7	5.5	6.4	6.3
1977	13.8	7.4	17.1	6.8	7.1	7.2

*Sample size less than 5 individuals

(ii) Striped Bass

(a) Impingement Estimates

The estimated monthly and total annual impingement of striped bass at Bowline Point Generating Station during 1977 is presented in Table VI-15. The annual impingement estimate of 19,072 striped bass reflected a maximum impingement rate of 99.78 fish per million cubic meters in February and minimum striped bass impingement (<0.20 striped bass per million cubic meters) during May and June. Striped bass impingement over the past three years has followed the same trend exhibited in the white perch impingement rates, i.e., a decline in the impingement rate since 1975, the first complete year of two-unit operation (Table VI-11).

(b) Size Distribution

Striped bass impingement throughout the first six months of 1977 was dominated by yearling fish (those spawned during the preceding summer), while the second half of the year was dominated by young-of-the-year fish (Table VI-16).

The mean lengths of striped bass impinged during 1977 have generally decreased since 1974 (Table VI-17), reflecting either an anomaly in the data or, more likely, the positioning of the barrier net across the intake (Section VI-C, 2b).

(iii) Atlantic Tomcod

(a) Impingement Estimates

An estimated 12,778 Atlantic tomcod were impinged during 1977 (Table VI-18); of these, more than half (6,457 fish)

TABLE VI-15

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	434	16.8227	25.7985	19.6105	506	
	2	1033	19.5619	52.8067	17.6894	934	
	3	929	14.0464	66.1379	19.6105	1297	
	4	378	11.2644	33.5571	28.0151	940	
			MONTH EST.RATE	44.5751	84.9255		3786
FEB	1	529	7.0329	75.2179	19.6105	1475	
	2	582	8.4493	68.8815	19.6105	1351	
	3	1353	8.4006	161.0599	19.6105	3158	
	4	658	7.0038	93.9490	19.6105	1842	
			MONTH EST.RATE	99.7771	78.4420		7827
MARCH	1	619	6.9493	89.0737	17.4258	1552	
	2	491	8.2858	59.2580	19.6105	1162	
	3	147	9.0212	16.2950	20.7852	339	
	4	53	8.4823	6.2483	28.0151	175	
			MONTH EST.RATE	42.7188	85.8366		3667
APRIL	1	19	3.9980	4.7524	19.6105	93	
	2	(NO SAMPLE)			19.6105		
	3	22	5.7985	3.7941	19.6105	74	
	4	11	12.6532	.8694	27.6280	24	
			MONTH EST.RATE	3.1386	86.4595		271
MAY	1	2	9.0671	.2206	21.0308	5	
	2	0	8.9470	.0000	19.9196	0	
	3	3	8.4138	.3566	20.7317	7	
	4	0	12.3550	.0000	31.5771	0	
			MONTH EST.RATE	.1443	93.2592		13
JUNE	1	0	8.5648	.0000	20.3253	0	
	2	2	8.7828	.2277	21.3930	5	
	3	2	8.5399	.2342	21.2188	5	
	4	2	7.5101	.2663	16.5158	4	
			MONTH EST.RATE	.1821	79.4529		14
JULY	1	0	2.0930	.0000	14.6507	0	
	2	0	2.0857	.0000	14.6507	0	
	3	2	1.9816	1.0093	14.3767	15	
	4	7	1.9919	3.5142	20.5831	72	
			MONTH EST.RATE	1.1309	64.2612		73
AUG	1	4	3.6431	1.0980	24.9190	27	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-15 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	52	4.1568	12.5096	28.5625	357	
		3	103	4.1423	24.8654	28.0580	698	
		4	20	7.9057	2.5298	36.3230	92	
				MONTH EST.RATE	10.2507	117.8625		1208
	SEPT	1	(NO SAMPLE)			29.0041		
		2	8	3.7331	2.1430	24.7263	53	
		3	0	1.7223	.0000	17.1065	0	
		4	(NO SAMPLE)			15.4926		
				MONTH EST.RATE	1.0715	86.3295		93
	OCT	1	52	8.7103	5.9699	21.7789	130	
		2	24	10.2383	2.3441	24.1126	57	
		3	126	10.2813	12.2553	24.1126	296	
		4	37	13.5441	2.7318	33.4370	91	
				MONTH EST.RATE	5.8253	103.4411		603
	NOV	1	9	5.5641	1.6175	19.6260	32	
		2	93	5.6322	16.5122	19.6105	324	
		3	52	8.4045	6.1872	19.6105	121	
		4	31	8.4142	3.6843	25.2136	93	
				MONTH EST.RATE	7.0003	84.0606		588
	DEC	1	18	8.4026	2.1422	19.6105	42	
		2	141	8.1935	17.2088	19.1572	330	
		3	120	8.2897	14.4758	19.6105	284	
		4	104	11.3228	9.1850	28.0151	257	
				MONTH EST.RATE	10.7530	86.3933		929
				ANNUAL EST.RATE	18.8806			19072

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF STRIPED BASS
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	3	1.0	2	.5	2	.5	0	.0	0	.0	0	.0
6.1- 7.0	68	23.4	65	14.6	60	15.0	3	6.3	0	.0	0	.0
7.1- 8.0	129	44.3	194	43.7	157	39.3	25	52.1	1	50.0	0	.0
8.1- 9.0	77	26.5	115	25.9	101	25.3	14	29.2	1	50.0	0	.0
9.1- 10.0	11	3.8	40	9.0	35	8.8	1	2.1	0	.0	0	.0
10.1- 11.0	0	.0	11	2.5	12	3.0	0	.0	0	.0	0	.0
11.1- 12.0	1	.3	1	.2	4	1.0	0	.0	0	.0	1	16.7
12.1- 13.0	0	.0	3	.7	6	1.5	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	2	.5	5	1.3	1	2.1	0	.0	0	.0
14.1- 15.0	0	.0	5	1.1	4	1.0	3	6.3	0	.0	0	.0
15.1- 16.0	0	.0	1	.2	4	1.0	1	2.1	0	.0	0	.0
16.1- 17.0	0	.0	2	.5	3	.8	0	.0	0	.0	0	.0
17.1- 18.0	1	.3	1	.2	1	.3	0	.0	0	.0	1	16.7
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
20.1- 21.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	1	.3	0	.0	1	.3	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	1	.2	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	1	.2	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
35.1- 36.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
38.1- 39.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE VI-16 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF STRIPED BASS
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
42.1- 43.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
44.1- 45.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
45.1- 46.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
46.1- 47.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
47.1- 48.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
48.1- 49.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
49.1- 50.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
50.1- 51.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
51.1- 52.0	0	.0	0	.0	1	.3	0	.0	0	.0	0	.0
TOTAL ANALYZED	291		444		400		48		2		6	
MEAN LENGTH	7.8		8.3		8.7		8.5		8.4		20.6	
VARIANCE	1.99		4.14		14.00		4.78		.34		194.74	

TABLE VI-16 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF STRIPED BASS
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	2	25.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	3	37.5	24	17.4	5	71.4	7	3.0	0	.0	0	.0
5.1- 6.0	2	25.0	47	34.1	1	14.3	103	44.0	63	35.2	55	16.3
6.1- 7.0	1	12.5	44	31.9	1	14.3	79	33.8	79	44.1	110	32.6
7.1- 8.0	0	.0	17	12.3	0	.0	28	12.0	31	17.3	111	32.9
8.1- 9.0	0	.0	3	2.2	0	.0	9	3.8	4	2.2	50	14.8
9.1- 10.0	0	.0	1	.7	0	.0	8	3.4	2	1.1	8	2.4
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.3
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.3
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	1	.7	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	1	.7	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
35.1- 36.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
38.1- 39.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE VI-16 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF STRIPED BASS
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
42.1- 43.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	.3
44.1- 45.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
45.1- 46.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
46.1- 47.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
47.1- 48.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
48.1- 49.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
49.1- 50.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
50.1- 51.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
51.1- 52.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	8		138		7		234		179		337	
MEAN LENGTH	4.8		6.3		5.1		6.3		6.5		7.2	
VARIANCE	1.07		7.98		.28		1.03		.61		5.49	

TABLE VI-17

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN LENGTH OF STRIPED BASS IN IMPINGEMENT COLLECTIONS

BOWLINE POINT GENERATING STATION - JANUARY-DECEMBER 1974-1977

	MONTHLY MEAN LENGTH (cm)					
YEAR	JAN	FEB	MAR	APR	MAY	JUN
1974	8.7	9.2	9.2	8.9	8.8	8.6
1975	10.8	9.3	9.5	9.1	27.3*	12.0*
1976	8.5	8.7	9.0	8.7	NL	NL
1977	7.8	8.3	8.7	8.5	8.4*	20.6*

	MONTHLY MEAN LENGTH (cm)					
YEAR	JUL	AUG	SEP	OCT	NOV	DEC
1974	9.7	8.8	7.6	7.6	7.8	9.0
1975	6.7	8.6*	18.5*	NL	NL	8.7
1976	NL	6.6*	8.8*	NL	8.1	7.7
1977	4.8	6.3	5.1	6.3	6.5	7.2

*Sample size less than 5 individuals
NL = No length taken

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
BOWLINE POINT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	77	16.8227	4.5772	19.6105	90	
	2	80	19.5619	4.0896	17.6894	72	
	3	94	14.0464	6.6921	19.6105	131	
	4	138	11.2644	12.2510	28.0151	343	
			MONTH EST.RATE	6.9025	84.9255		586
FEB	1	143	7.0329	20.3330	19.6105	399	
	2	167	8.4493	19.7650	19.6105	388	
	3	139	8.4006	16.5464	19.6105	324	
	4	67	7.0038	9.5662	19.6105	188	
			MONTH EST.RATE	16.5527	78.4420		1298
MARCH	1	28	6.9493	4.0292	17.4258	70	
	2	27	8.2858	3.2586	19.6105	64	
	3	56	9.0212	6.2076	20.7852	129	
	4	9	8.4823	1.0610	28.0151	30	
			MONTH EST.RATE	3.6391	85.8366		312
APRIL	1	3	3.9980	.7504	19.6105	15	
	2	(NO SAMPLE)			19.6105		
	3	0	5.7985	.0000	19.6105	0	
	4	0	12.6532	.0000	27.6280	0	
			MONTH EST.RATE	.2501	86.4595		22
MAY	1	2	9.0671	.2206	21.0308	5	
	2	145	8.9470	16.2066	19.9196	323	
	3	374	8.4138	44.4508	20.7317	922	
	4	911	12.3550	73.7353	31.5771	2328	
			MONTH EST.RATE	33.6533	93.2592		3138
JUNE	1	906	8.5648	105.7818	20.3253	2150	
	2	1711	8.7828	194.8126	21.3930	4168	
	3	134	8.5399	15.6911	21.2188	333	
	4	66	7.5101	8.7882	16.5158	145	
			MONTH EST.RATE	81.2684	79.4529		6457
JULY	1	16	2.0930	7.6445	14.6507	112	
	2	3	2.0857	1.4384	14.6507	21	
	3	16	1.9816	8.0743	14.3767	116	
	4	10	1.9919	5.0203	20.5831	103	
			MONTH EST.RATE	5.5444	64.2612		356
AUG	1	4	3.6431	1.0980	24.9150	27	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE VI-18 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
BOWLINE POINT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	9	4.1568	2.1651	28.5625	62	
		3	42	4.1423	10.1393	28.0580	284	
		4	42	7.9057	5.3126	36.3230	193	
				MONTH EST.RATE	4.6788	117.8625		551
	SEPT	1	(NO SAMPLE)			29.0041		
		2	2	3.7331	.5358	24.7263	13	
		3	0	1.7223	.0000	17.1065	0	
		4	(NO SAMPLE)			15.4926		
				MONTH EST.RATE	.2679	86.3295		23
	OCT	1	2	8.7103	.2296	21.7789	5	
		2	8	10.2383	.7814	24.1126	19	
		3	2	10.2813	.1945	24.1126	5	
		4	0	13.5441	.0000	33.4370	0	
				MONTH EST.RATE	.3014	103.4411		31
	NOV	1	0	5.5641	.0000	19.6260	0	
		2	0	5.6322	.0000	19.6105	0	
		3	0	8.4045	.0000	19.6105	0	
		4	0	8.4142	.0000	25.2136	0	
				MONTH EST.RATE	.0000	84.0606		0
	DEC	1	0	8.4026	.0000	19.6105	0	
		2	0	8.1935	.0000	19.1572	0	
		3	0	8.2897	.0000	19.6105	0	
		4	2	11.3228	.1766	28.0151	5	
				MONTH EST.RATE	.0442	86.3933		4
				ANNUAL EST.RATE	12.7586			12778

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

were impinged in June. The minimum impingement rate was exhibited in November and December (<0.05 fish per million cubic meters, and in April, September, and October (<0.35 fish per million cubic meters).

Altantic tomcod impingement rates have been variable over the three-year span of two-unit operation. The maximum rate was found in 1975, followed by the lowest rate in 1976 and an increased rate in 1977 (Table VI-11). Maximum tomcod abundance in 1977 occurred during June, coincident with the period in which the barrier net was absent. During June of 1976, while the barrier net was in position, the Atlantic tomcod impingement rate was less than half of that recorded for June 1977.

(b) Size Distribution

Length frequency data indicate that one-year-old tomcod dominated the January through March collections, and moved out of the Bowline Point vicinity in April; the juveniles or young-of-the-year were recruited into the impingement process in May through August (Table VI-19). Although there appeared to be a few older fish in the January and February collections, the vast majority of the impinged population were one-year-olds.

Monthly mean lengths between years has varied, with essentially the same populations being impinged each year (Table VI-20).

TABLE VI-19

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	29	8.4	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	256	73.8	10	3.7
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	62	17.9	112	41.3
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	137	50.6
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	11	4.1
8.1- 9.0	0	.0	0	.0	1	1.0	0	.0	0	.0	0	.0
9.1- 10.0	1	1.0	2	.6	1	1.0	0	.0	0	.0	0	.0
10.1- 11.0	4	4.1	8	2.3	6	5.9	0	.0	0	.0	0	.0
11.1- 12.0	12	12.4	25	7.1	12	11.8	1	50.0	0	.0	0	.0
12.1- 13.0	9	9.3	59	16.8	16	15.7	1	50.0	0	.0	0	.0
13.1- 14.0	25	25.8	78	22.2	15	14.7	0	.0	0	.0	0	.0
14.1- 15.0	25	25.8	59	16.8	20	19.6	0	.0	0	.0	0	.0
15.1- 16.0	8	8.2	51	14.5	14	13.7	0	.0	0	.0	0	.0
16.1- 17.0	2	2.1	34	9.7	8	7.8	0	.0	0	.0	0	.0
17.1- 18.0	8	8.2	16	4.6	9	8.8	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	6	1.7	0	.0	0	.0	0	.0	1	.4
19.1- 20.0	1	1.0	3	.9	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	2	.6	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	2	.6	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	2	2.1	2	.6	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	2	.6	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	2	.6	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	97		351		102		2		347		271	
MEAN LENGTH	14.1		14.5		14.0		12.1		4.7		6.1	
VARIANCE	4.52		5.18		4.29		.41		.20		.87	

TABLE VI-19 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
BOWLINE POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	2	5.0	4	4.9	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	16	40.0	23	28.0	1	50.0	2	16.7	0	.0	0	.0
7.1- 8.0	13	32.5	24	29.3	0	.0	9	75.0	0	.0	0	.0
8.1- 9.0	1	2.5	15	18.3	1	50.0	1	8.3	0	.0	0	.0
9.1- 10.0	1	2.5	9	11.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	5	6.1	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	1	1.2	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	1	2.5	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	1	1.2	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	1	2.5	0	.0	0	.0	0	.0	0	.0	1	50.0
17.1- 18.0	2	5.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	2	5.0	0	.0	0	.0	0	.0	0	.0	1	50.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	1	2.5	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	40		82		2		12		0		2	
MEAN LENGTH	8.9		7.9		7.6		7.5				17.6	
VARIANCE	17.32		2.47		2.44		.16				3.94	

TABLE VI-20

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN LENGTH OF ATLANTIC TOMCOD IN IMPINGEMENT COLLECTIONS

BOWLINE POINT GENERATING STATION - JANUARY-DECEMBER 1974-1977

	MONTHLY MEAN LENGTH (cm)					
YEAR	JAN	FEB	MAR	APR	MAY	JUN
1974	16.4	14.3	16.3	17.4*	4.8*	6.8
1975	12.5	12.9	12.9	11.8*	5.2*	6.4
1976	13.8	15.3	14.7	NL	4.8	6.4
1977	14.1	14.5	14.0	12.1*	4.7	6.1

	MONTHLY MEAN LENGTH (cm)					
YEAR	JUL	AUG	SEP	OCT	NOV	DEC
1974	7.6	8.4	7.8	9.8	10.5	12.3
1975	8.1	7.0*	6.8*	10.8*	NL	12.7
1976	7.2	9.1	9.7	21.5*	11.4	11.9
1977	8.9	7.9	7.6*	7.5	NL	17.6*

*Sample size less than 5 individuals
NL - No lengths taken

2. Special Studies

a. Collection Efficiency Studies

On going screen collection efficiency studies, initiated in 1976, are herein summarized through May 1978, providing for a total of 74 surveys. Survey dates, operating pumps and screens, release location, and species released and recovered are outlined in Tables VI-21 and VI-22.

Only sample sizes greater than 50 fish were used for the analysis of the data. The majority of the samples consisted of 100 fish, an average sample size during normal impingement surveys. An additional survey (2 May 1977) was also deleted from the data analysis due to clear aberrations in the sampling procedure. The malfunction of the screenwash pumps combined with heavy debris resulted in a non-quantitative estimate of recovery efficiency.

Based on data that meet the prescribed criteria, a mean collection efficiency of 78% with a 95% confidence interval of from 74-82% was described.

b. Barrier Net Study

(i) Introduction

Extensive investigations have been conducted to quantify the numbers and survival of fish impinged on cooling water intake debris screens at relatively new power plants located on the lower Hudson River estuary. Determining the number of fish impinged is important in evaluating the impact of such generating facilities on various fish populations.

TABLE VI-21

ORANGE AND ROCKLAND UTILITIES, INC.
AQUATIC ECOLOGY STUDIES

IMPINGEMENT COLLECTION EFFICIENCY

BOWLINE POINT GENERATING STATION - 1976-1978

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	NUMBER RECAPTURED @ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	RELEASED II	RELEASED III	RECAPTURED I	RECAPTURED II	RECAPTURED III
27 OCT 1976	4,5	$4,5_{1,2,3}$	52	Screen 3	RH	18	1000	NC		0						
					SB	1			1	1						
					WP	4				0						
3 NOV 1976	4,5	$4,5_{1,2,3}$	56	Screen 4	WP	9	1000	NC	1	1						
					SB	1				0						
					BBH	7			1	1						
10 NOV 1976	4,5	$4,5_{1,2,3}$	56	Random Scrn.	WP	70	1130	NC	38	38						
					RH	20			9	9						
17 NOV 1976	4,5	$4,5_{1,2,3}$	52	Screen 4	WP	13	1000	NC	5	5						
24 NOV 1976	$4,5_{2,3}$	$4,5_{2,3}$	56	Screen 3	WP	40	1330	NC	29	29						
					SB	40			36	36						
					GSD	19			9	9						
					AW	1			1	1						
					BKL	1			1	1						
					PS	1			1	1						
8 DEC 1976	$4,5_{2,3}$	$4,5_{2,3}$	61	Screen 5	SB	50	1000	NC	18	18						
					WP	50			20	20						
					GSD	9			2	2						
					AW	1				0						
15 DEC 1976	$4,5_{2,3}$	$4,5_{1,2,3}$	52	Screen 2	ATC	1	1150	NC	1	1						
					SB	50			40	40						
					WP	50			48	48						
22 DEC 1976	$4,5_{2,3}$	4,5	41	Screen 2	WP	50	1150	NC	49	49						
					SB	50			50	50						
					ATC	5			4	4						
					AW	1			0	0						
29 DEC 1976	$4,5_{2,3}$	$4,5_{1,2,3}$	49	Manhole at Screen 2	WP	70	1130	NC	67	67						
					SB	28			27	27						
24 JAN 1977	$4,5_{2,3}$	$4_{1,2,3}$	40	Screen 3	WP	49	1045	35	0	35	49					
					SB	50		32	0	32	50					

TABLE VI-21 (CONTINUED)

IMPINGEMENT COLLECTION EFFICIENCY

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	NUMBER RECAPTURED @ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	RELEASED II	RELEASED III	RECAPTURED I	RECAPTURED II	RECAPTURED III
31 JAN 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	50	Screen 5	WP	65	1000	53	2	55	65					
					SB	37		37	0	37	37					
7 FEB 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	52	Screen 2	WP	50	1020	47	0	47	47	1	2			
					SB	50		51	0	51	49	1				
14 FEB 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	50	Screen 5	WP	50	1020	45	0	45	50					
					SB	50		47	0	47	50					
21 FEB 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	49	Screen 1	WP	50	1025	40	0	40	50					
					SB	50		42	0	42	49	0	1			
28 FEB 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	49	Screen 5	WP	50	1010	48	0	48	50					
					SB	50		46	0	46	49	1				
7 MAR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	45	Screen 1	WP	50	1010	48	0	48	50					
					SB	50		38	2	40	50					
14 MAR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	39	Screen 6	WP	82	1030	70	0	70	81		1			
					SB	18		14	1	15	16	2				
21 MAR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	54	Screen 4	WP	83	1010	71	0	71	83					
					SB	17		16	0	16	15	2				
28 MAR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	42	Screen 6	WP	88	1010	58	0	58	88					
					SB	12		9	0	9	11	1				
4 APR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	52	Screen 4	WP	93	1005	78	2	80	93					
					SB	7		6	0	6	7					
18 APR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	60	Screen 2	WP	92	1046	82	0	82	92					
					SB	8		7	0	7	8					
25 APR 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	60	Screen 6	WP	99	1015	79	0	79	99					
					SB	1		1	0	1	1					
2 MAY 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	59	Screen 4	WP	95	1130	1	0	1	88	4	3			
					RSM	5		1	0	1	5					
9 MAY 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	54	Screen 3	WP	49	1030	45	0	45	46	2	1			
					SB	1		1	0	1	1					

TABLE VI-21 (CONTINUED)

IMPINGEMENT COLLECTION EFFICIENCY

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	@ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	II	III	RECAPTURED I	II	III
16 MAY 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	60	Screen 4	WP	32	1000	7	0	7	28	1	3			
23 MAY 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	52	Screen 1	WP	100	1100	NC	73	73	83	8	9			
30 MAY 1977	$4,5_{2,3}$	$4,5,6_{1,2,3}$	52	Screen 3	WP	31	1040	21	0	21	2	9	20			
6 JUN 1977	$5,6_{2,3}$	$4,5,6_{1,2,3}$	58	Screen 2	WP	100	1100	86	0	86	33	32	35			
13 JUN 1977	$5,6_{2,3}$	$4,5,6_{1,2,3}$	55	Screen 4	WP	77	1100	65	0	65	10	16	61			
20 JUN 1977	$5,6_{2,3}$	$4,5,6_{1,2,3}$	55	Screen 3	WP	37	1000	34	0	34		37	30			
27 JUN 1977	4,5,6	$4,5,6_{1,2,3}$	54	Screen 6	WP	19	1015	17	0	17	3		16			
					BA	2		1	0	1	2					
					SF	2		2	0	2		2				
3 OCT 1977	$5,6_{2,3}$	$4,5,6_{1,2,3}$	69	Screen 2	WP	3	1045	NC	3	3	2		1			
					BBH	14			9	9	14					
					AW	2			2	2	2					
10 OCT 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	58	Screen 5	WP	9	1030	6	0	6	9					
					RSM	7		6	0	6	7					
					BA	1		1	0	1	1					
					ATC	2		1	0	1	3					
					RH	81		51	0	51	78	3				
17 OCT 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	44	Screen 1	RH	100	1030	47	0	47	97	3				
24 OCT 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 6	WP	95	1030	11	1	12	95					
					SB	5		3	0	3	5					
31 OCT 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 4	WP	93	1030	60	1	61	91	1	1			
					SB	7		3	0	3	7					
7 NOV 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 3	WP	12	1030	7	0	7	11		1			
					SB	2		1	0	1	2					
					BBH	22		17	0	17	22					
					WF	1		1	0	1	1					
					SPT	1		1	0	1			1			
					BSF	2		0	0	0	2					
					RSM	1		0	0	0	1					

TABLE VI-21 (CONTINUED)

IMPINGEMENT COLLECTION EFFICIENCY

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	NUMBER RECAPTURED @ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	RELEASED II	RELEASED III	RECAPTURED I	RECAPTURED II	RECAPTURED III
14 NOV 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 5	WP	87	1030	40	0	40	86	1				
					SB	13		8	0	8	13					
21 NOV 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 1	WP	99	1030	69	0	69	96	3				
					SB	1		1	0	1	1					
28 NOV 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	59	Screen 2	WP	98	1030	97	0	97	96	2				
					SB	2		2	0	2	2					
5 DEC 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	59	Screen 4	WP	100	1030	95	3	98	97	3				
12 DEC 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	55	Screen 1	WP	82	1045	57	0	57	60	22				
					SB	17		10	0	10	17					
					ATC	1		1	0	1		1				
19 DEC 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	56	Screen 4	WP	90	1015	65	21	86	87	2	1			
					SB	10		9	0	9	10					
26 DEC 1977	$4,5_{1,2}$	$4,5,6_{1,2,3}$	56	Screen 3	WP	88	1030	86	0	86	88					
					SB	12		11	0	11	12					
2 JAN 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	56	Screen 5	WP	88	1030	71	0	71	88					
					SB	12		6	0	6	12					
9 JAN 1978	$4,5_{1,2}$	$4,6_{1,2,3}$	58	Screen 2	WP	93	1015	68	0	68	93					
					SB	7		2	0	2	7					
16 JAN 1978	$4,5_{1,2}$	$4,6_{1,2,3}$	62	Screen 4	WP	83	1030	79	0	79	79	2	2			
					SB	11		10	0	10	11					
					GSD	3		3	0	3	1	2				
					WB	1		1	0	0	1	1				
					ATC	2		2	0	0	2		2			
23 JAN 1978	$4,5_{1,2}$	$4,6_{1,2,3}$	59	Screen 1	WP	93	1020	49	1	51	92	1				
					SB	7		4	0	4	7	0				
30 JAN 1978	$4,5_{1,2}$	$4,6_{1,2,3}$	60	Screen 3	WP	100	1030	97	0	97	97	1	2			
6 FEB 1978	4,5	1,2,3	NA	Screen 2	WP	73	1030	NC	68	69	70	1	2			
					SB	27		NC	24	24	27					

TABLE VI-21 (CONTINUED)

IMPINGEMENT COLLECTION EFFICIENCY

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	NUMBER RECAPTURED @ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	RELEASED II	RELEASED III	RECAPTURED I	RECAPTURED II	RECAPTURED III
13 FEB 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	58	Screen 4	WP	79	1030	72	1	73	78	1				
					SB	21		20	0	20	21					
20 FEB 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 4	WP	88	1030	NC	48	54	84	3	1			
					SB	12		NC	7	9	12					
6 MAR 1978	1,2	$4,5,6_{1,2,3}$	59	Screen 2	WP	75	1045	NC	32	33	67	3	5	26	2	4
					SB	20		NC	10	10	20			10		
13 MAR 1978	1,2	$4,5,6_{1,2,3}$	59	Screen 2	WP	57	1045	48	0	48	50	6	1	42	5	1
					SB	16		14	0	14	16			14		
20 MAR 1978	1,2	$4,5,6_{1,2,3}$	59	Screen 2	WP	60	1015	NC	49	49	58	2		47	2	
					SB	40		NC	33	33	39	1		32	1	
27 MAR 1978	1,2	$4,5,6_{1,2,3}$	59	Screen 2	WP	75	1020	65	0	65	71	2	2	61	2	2
					SB	25		22	0	22	25			22		
3 APR 1978	1,2	$4,5,6_{1,2,3}$	60	Screen 1	WP	50	1015	NC	47	47	46	2	2	43	2	2
					SB	50		NC	48	48	50			48		
10 APR 1978	1,2	$4,5,6_{1,2,3}$	60	Screen 3	WP	50	1000	39	0	39	28	22		21	18	
					SB	50		43	0	43	50			43		
17 APR 1978	$4_{1,2}$	$4,5,6_{1,2,3}$	58	Screen 1	WP	57	1015	NC	47	47	57			47		
					SB	43		NC	37	37	42	1		36	1	
24 APR 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 2	WP	72	1015	48	0	48	67	4	1	44	4	
					SB	28		18	0	18	28			18		
1 MAY 1978	1,2	$4,5,6_{1,2,3}$	61	Screen 2	WP	83	1000	NC	68	68	83			68		
					SB	17		NC	16	16	16	1		16		
8 MAY 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	60	Screen 4	WP	100	1000	NC	88	88	95		5			
15 MAY 1978	4,5	$4,5,6_{2,3}$	51	Screen 4	WP	100	0950	NC	70	70	100			70		
			30	Screen 5	WP	100	0955	NC	70	70	70			70		
17 MAY 1978	4,5	$4,5,6_{1,2,3}$	52	Screen 4	WP	93	0930	NC	58	58	93			58		
					SB	7		NC	3	3	6	1		2	1	
			30	Screen 5	WP	100	0935	NC	83	83	100			83		

TABLE VI-21 (CONTINUED)

IMPINGEMENT COLLECTION EFFICIENCY

DATE	OPERATING PUMPS	OPERATING SCREENS	AVG SCREEN WASH PRESSURE (PSI)	RELEASE LOCATION	SPECIES RELEASED	NUMBER RELEASED	RELEASE TIME	NUMBER RECAPTURED @ 12 HRS	NUMBER RECAPTURED @ 24 HRS	TOTAL[a]	SIZE DISTRIBUTION[b] RELEASED I	RELEASED II	RELEASED III	RECAPTURED I	RECAPTURED II	RECAPTURED III
20 MAY 1978	$4,5_2$	$4,5,6_{1,2,3}$	59	Screen 4	WP	98	1020	NC	69	69	60	38		47	22	
					SB	2		NC	2	2	1	1		1	1	
			32	Screen 5	WP	100	1015	NC	85	85	91	9		80	5	
22 MAY 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	62	Screen 2	WP	100	1020	NC	50	50	74	8	18	41	3	6
			30	Screen 5	WP	100	1030	NC	84	84	30	70		22	62	
27 MAY 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	30	Screen 4	WP	100	0945	NC	92	92	25	64	11	25	63	4
			58	Screen 3	WP	100	0955	NC	62	62	19	78	3	14	46	2
29 MAY 1978	$4,5_{1,2}$	$4,5,6_{1,2,3}$	30	Screen 1	WP	77	1000	NC	56	56	17	58	2	7	47	2
			59	Screen 6	WP	66	1015	NC	55	55	21	41	4	17	35	3

[a] Totals may reflect additional recoveries after 24 hours
[b] Size class I: Less than 10.5 cm
Size class II: 10.5-15.0 cm
Size class III: 15.1-25.0 cm
[c] Field identification of 1 WP probably in error; number released most likely 49 WP and 51 SB
NC: No Collection

WP: White perch
SB: Striped bass
RH: River herring
ATC: Atlantic tomcod
WF: Weakfish
SPT: Spot
WB: White bass
AW: Alewife
PS: Pumpkinseed
GSD: Gizzard shad
BBH: Blueback herring
RSM: Rainbow smelt
BSF: Bluegill sunfish
BKL: Banded killifish

TABLE VI-22

ORANGE AND ROCKLAND UTILITIES, INC.
AQUATIC ECOLOGY STUDIES

RECOVERY RATE OF TAGGED FISH BY UNIT AND TRAVELING SCREEN

BOWLINE POINT GENERATING STATION - 1976-1978

DATE	TOTAL NUMBER RELEASED	TOTAL NUMBER RECOVERED	%	PERCENT RECOVERY BY SCREEN UNIT 2 1(A)	UNIT 2 2(B)	UNIT 2 3(C)	UNIT 1 4(A)	UNIT 1 5(B)	UNIT 1 6(C)	SCREENWASH MODE INTERMITTANT	SCREENWASH MODE CONTINUOUS
27 OCT 1976	23	1	4.4[b]							X	
3 NOV	17	2	11.8[b]							X	
10 NOV	90[a]	47[a]	52.2[b]							X	
17 NOV	13	5	38.5[b]							X	
24 NOV	102	77	75.5			75				X	
8 DEC	110	40	36.4					36		X	
15 DEC	101	89	88.1		88					X	
22 DEC	106	103	97.2		97					X	
29 DEC	98	94	95.9		96					X	
24 JAN 1977	99	67	67.7			68				X	
31 JAN	102	92	90.2					90			X
7 FEB	100	98	98.0		98						X
14 FEB	100	92	92.0					92			X
21 FEB	100	82	82.0	82							X
28 FEB	100	94	94.0					94		X	
7 MAR	100	88	88.0	88						X	
14 MAR	100	85	85.0						85	X	
21 MAR	100	87	87.0				87			X	
28 MAR	100	67	67.0				67			X	
4 APR	100	86	86.0				86			X	
18 APR	100	89	89.0		89					X	
25 APR	100	80	80.0[b]						80	X	
2 MAY	100	2	2.0[b]							X	
9 MAY	50	46	92.0[b]			92				X	
16 MAY	32	7	21.9[b]							X	
23 MAY	100	73	73.0[b]	73						X	
30 MAY	31	21	67.7[b]							X	
6 JUN	100	86	86.0		86					X	
13 JUN	77	65	84.4[b]				84			X	
20 JUN	37	34	91.2[b]							X	
27 JUN	23	20	87.0[b]							X	
3 OCT	19	14	73.7[b]							X	
10 OCT	100	65	65.0					65		X	
17 OCT	100	47	47.0	47						X	
24 OCT	100	15	15.0						15	X	
31 OCT	100	64	64.0[b]				64			X	
7 NOV	41	27	65.9[b]							X	
14 NOV	100	48	48.0					48		X	
21 NOV	100	70	70.0	70						X	
28 NOV	100	99	99.0		99					X	
5 DEC	100	98	98.0				98			X	
12 DEC	100	68	68.0	68						X	
19 DEC	100	95	95.0				95			X	
26 DEC	100	97	97.0			97				X	

TABLE VI-22 (Continued)

RECOVERY RATE OF TAGGED FISH BY UNIT AND TRAVELING SCREEN

DATE	TOTAL NUMBER RELEASED	TOTAL NUMBER RECOVERED	%	PERCENT RECOVERY BY SCREEN						SCREENWASH MODE	
				UNIT 2			UNIT 1				
				1(A)	2(B)	3(C)	4(A)	5(B)	6(C)	INTERMITTANT	CONTINUOUS
2 JAN 1978	100	77	77.0					77		X	
9 JAN	100	70	70.0		70					X	
16 JAN	100	95	95.0				95			X	
23 JAN	100	55	55.0	55						X	
30 JAN	100	97	97.0			97				X	
6 FEB	100	93	93.0		93						X
13 FEB	100	93	93.0				93			X	
20 FEB	100	63	63.0				63			X	
6 MAR	95	43	45.3		45					X	
13 MAR	73	62	84.9		85						X
20 MAR	100	82	82.0		82					X	
27 MAR	100	87	87.0		87					X	
3 APR	100	95	95.0	95						X	
10 APR	100	82	82.0			82				X	
17 APR	100	84	84.0	84						X	
24 APR	100	66	66.0		66					X	
1 MAY	100	84	84.0		84					X	
8 MAY	100	88	88.0				88			X	
15 MAY	100	70	70.0				70			X	
	100	70	70.0					70			X
17 MAY	100	61	61.0				61			X	
	100	83	83.0					83			X
20 MAY	100	71	71.0				71			X	
	100	85	85.0					85			X
22 MAY	100	50	50.0		50					X	
	100	84	84.0					84			X
27 MAY	100	92	92.0				92				X
	100	62	62.0			62				X	
29 MAY	77	56	72.7	73							X
	66	55	83.0						83	X	

[a]The fish were randomly distributed across all the screens
[b]Does not meet sample criteria

Impingement on the intake screens is a phenomenon that affects predominately fish within their first year of life. Generally, yearly peaks in impingement occur during the late fall, winter, and early spring months at each facility.

The study conducted at the Bowline Point Generating Station entailed an investigation of the use of a barrier net placed at an angle to the intake current within a reduced velocity field to guide young fish from the vicinity of the intake, thereby reducing the potential for impingement (Figure VI-1). This investigation was undertaken because impingement data collected at the plant indicated that total annual impingement would be substantially reduced if impingement during peak periods could be reduced. A barrier net was chosen as the device for impingement mitigation since capital investment was minimal (several thousand dollars) and the net was easily deployed and retrieved.

Emphasis has been placed upon the effectiveness of the barrier net in reducing the impingement of white perch (Morone americana), which predominates in annual impingement totals (45-85%), and striped bass (Morone saxatilus), a species of commercial and sport fishing importance. Striped bass generally comprises less than 15% of total annual impingement.

(ii) Methods

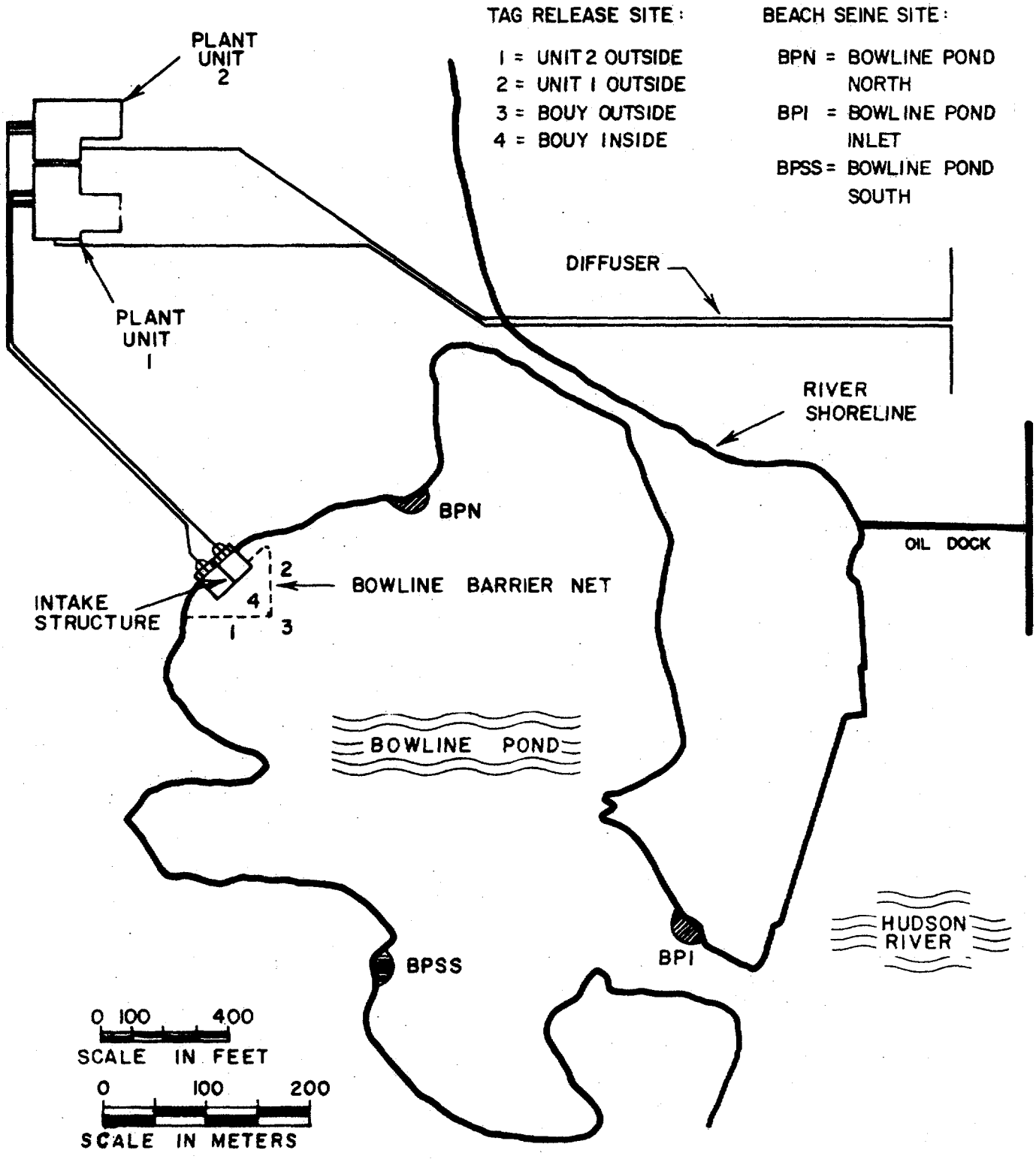
The barrier net was designed for placement in front of the intake within a velocity field low enough to allow fish to detect the net and swim away from the intake area.

FIGURE VI -1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

LOCATION OF BARRIER NET, TAG RELEASE SITES AND BOWLINE POND BEACH SEINE SITES

BOWLINE POINT GENERATING STATION - 1976 - 1977



The measured velocity along the barrier net ranged from 6.1 to a maximum of 15.2 cm/sec when measured during a higher flow regime (1,194 m^3/min vs 971 m^3/min) than is generally used during the winter months. The estimated maximum approach velocities to the screens at an intake flow of 1,194 m^3/min is 23.3 cm/sec.

The bottom contour of the pond where the net was placed varied from approximately 3 meters in depth at the south retaining wall to 10.7 meters at the apex and 7 meters at the intake. The net was held in place by attaching it to a 2250-kg concrete anchor at the apex. A 1.27 cm chain was attached to the lead line and concrete anchors were added to the lead line, as necessary, to hold the net in position. A large buoy located at the apex as well as styrofoam floats kept the apex and wings of the net at the surface.

The evaluation of the use of a barrier net commenced on 9 April 1976 with a preliminary deployment of a 1.27 cm square mesh multifilament nylon net in front of the Bowline intake (Figure VI-2). The net was removed on 8 July 1976.

The next phase of the barrier net study was initiated on 10 December with the deployment of the 1.27-cm square mesh netting in front of Unit 2 (Figure VI-3). Separate collections on Unit 1 and Unit 2 continued approximately daily from 10 December 1976 through 13 February 1977. The net was adjusted at the end of December to place the float line approximately 1.5 meters below the surface. This was done to insure that the net would not become lodged in and potentially damaged by winter ice.

On 10 March 1977 a 0.95-cm square multifilament nylon mesh net was placed in front of Unit 1 following deployment procedures similar to those used for the Unit 2 net (Figure VI-3). Both nets were deployed from surface to bottom.

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

GENERALIZED ILLUSTRATION OF BARRIER NET DEPLOYMENT

BOWLINE POINT GENERATING STATION - 1976 - 1977

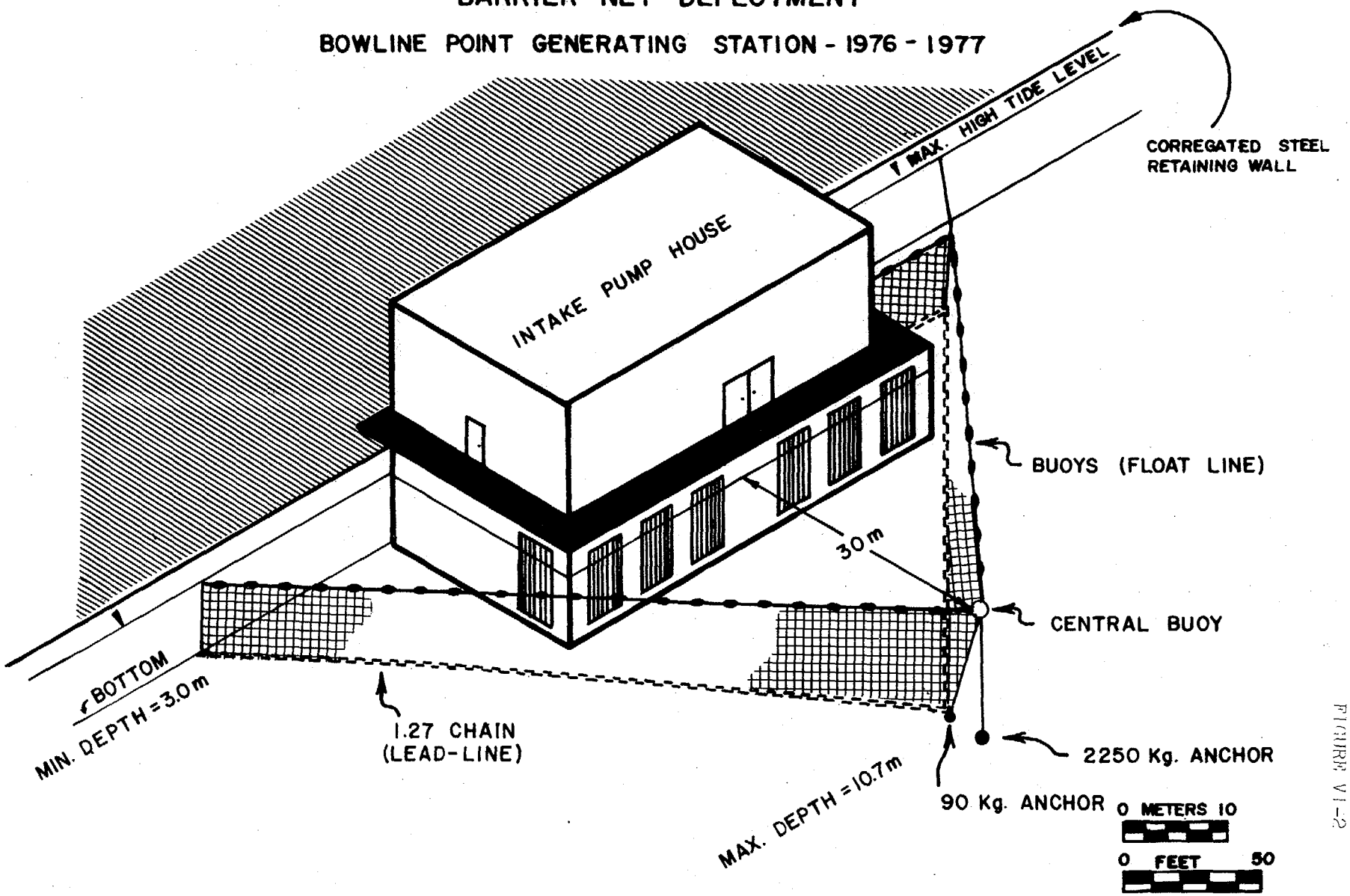


FIGURE VI-2

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

1.27 cm VS. 0.95 cm MESH BARRIER NET COMPARISON STUDY

BOWLINE POINT GENERATING STATION - 1976 - 1977

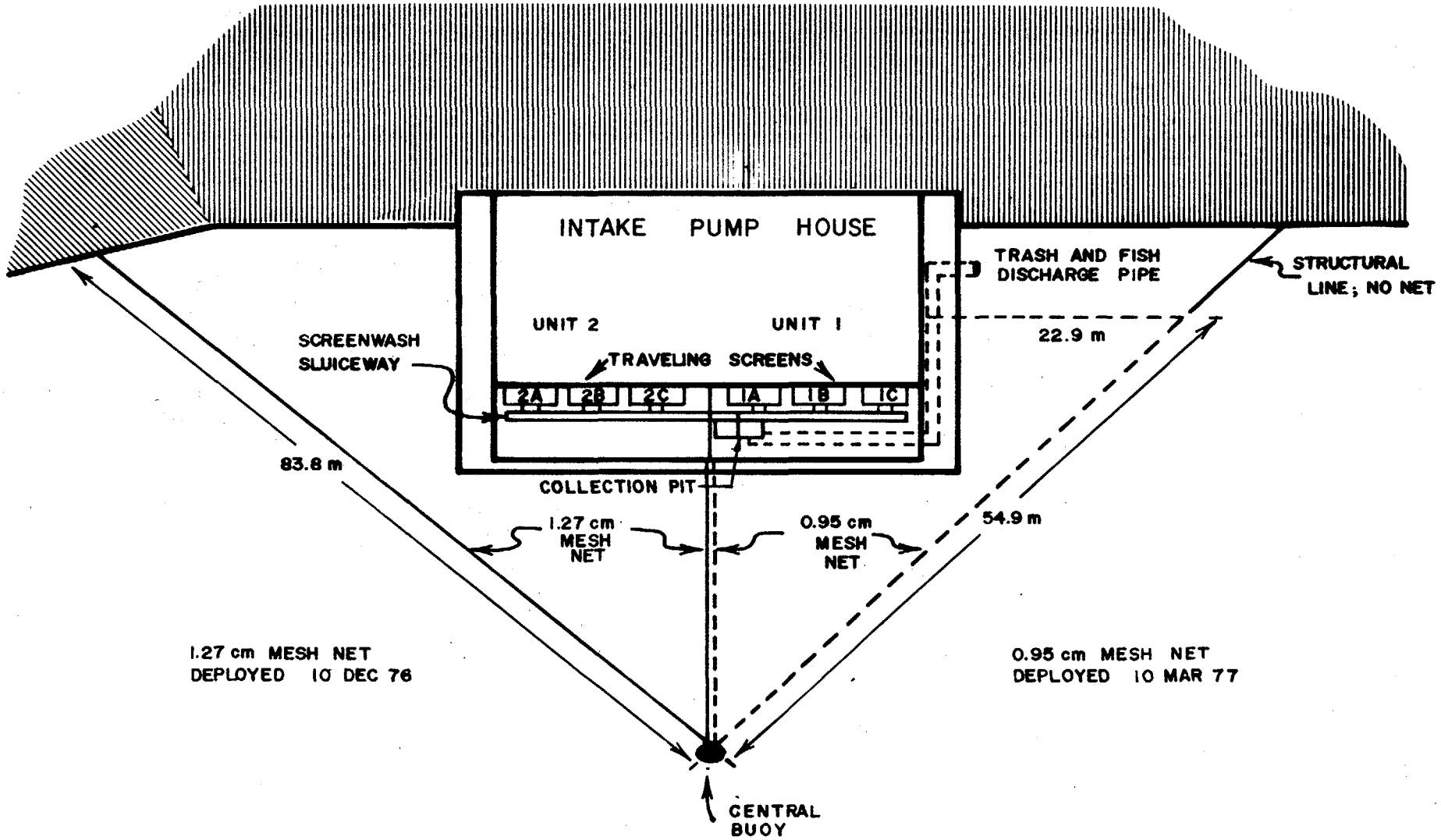


FIGURE VI-3

Separate impingement collections were continued for Unit 1 and Unit 2 through 17 May 1977, when both nets were removed for the season. The collection frequency varied between one and three 24-hour collection periods per week. The number of paired Unit 1-Unit 2 samples collected for the net study are summarized below in Table VI-23.

TABLE VI-23: THE NUMBER OF SAMPLES COLLECTED TO DETERMINE THE EFFECTIVENESS OF A BARRIER NET IN REDUCING IMPINGEMENT

IMPINGEMENT COLLECTION INTERVAL	COMPARISON	NUMBER OF 24 HOUR PAIRED SAMPLES COLLECTED*
25 NOV-10 DEC 1976 and 21 MAY-18 OCT 1977	Unit 1 and Unit 2 without net deployed	29
10 DEC 1976-13 FEB 1977	1.27 cm mesh net Unit 2 no net at Unit 1	37
14 MAR-12 MAY 1977	1.27 cm mesh net Unit 2 0.95 cm mesh net Unit 1	19

*With white perch or striped bass present in samples.

On 18 October 1977, the 0.95-cm square multifilament nylon mesh net was deployed across the entire intake face (Figure VI-2) and left in place until 1 June 1978. The only major alterations made were the lowering (16 December 1977) and raising (11 April 1978) of the net to protect it from pond ice.

Fish and invertebrates were collected from the screens at the impingement collection pit located inside the intake structure (Figure VI-3). An angle iron basket (63.5 x 195.8 cm) of 0.95-cm square steel mesh lined with a 0.64-cm square mesh heavy duty nylon net bag was used to collect the sample. Relevant plant operating conditions, including

operating pumps and screens, screen wash mode, and pressures, as well as wash times and duration, were recorded on field data records.

Fish impinged during the net evaluation study were counted and identified for each intake unit. Measurements of total length by unit were made on selected species in approximately three 24-hour impingement collections per week for the duration of the study. When impingement collections were large, a random subsample was selected.

Data from impingement collections of white perch and striped bass at the Bowline Point plant since 1973 were also utilized to evaluate the annual patterns of impingement at the plant. The method of sample collection and analysis of impinged fish at the intake was similar to that described above. A complete description of historical impingement collections can be found in Tables VI-1 and VI-2. The periods during which a barrier net has been in place at the Bowline Point plant are noted in Table VI-24.

TABLE VI-24

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

PERIODS OF BARRIER NET DEPLOYMENT

BOWLINE POINT GENERATING STATION - 1976-1978

PERIOD OF DEPLOYMENT	BARRIER NET CONFIGURATION
9 APR- 8 JUL 1976	Preliminary Evaluation 1.27-cm mesh deployed across Unit 1 and Unit 2
10 DEC 1976-17 MAY 1977	Evaluation of 1.27-cm mesh in front of Unit 2 and 0.95-cm mesh in front of Unit 1
18 OCT 1977- 1 JUN 1978	Deployment of 0.95-cm mesh in front of Unit 1 and Unit 2

Comparisons were made between white perch and striped bass beach seine collections in Bowline Pond and impingement collections at the intake from 1973 through 1977. The beach seine utilized was a 30.5 m x 2.4 m bag seine of 0.64-cm mesh netting. The sampling sites and frequency of sampling varied between years; however, in order to maintain comparability of the data between years, only the beach seine catch per effort data from selected sites (Figure VI-1) collected during the day were utilized. The laboratory analysis of beach seine collections was similar to that described above for impingement collections. A more detailed description of field and laboratory procedures associated with these collections can be found in O&R 1977.

During various phases of the barrier net study, live young-of-the-year and yearling white perch and striped bass were tagged by injecting colored latex into the caudal fin, such that fish from each release site could be identified by a specific color. The tagged fish were released at three sites located immediately outside of and at one site inside of the barrier net near the bottom (Figure VI-1). Impingement samples were then collected at the plant intake for intervals of between 24 and 48 hours after release.

(iii) Results

(a) Impingement Abundance of White Perch and Striped Bass at Unit 1 and Unit 2

The impingement abundance data for Unit 1 and Unit 2 was examined to determine if differences between the units could be detected in the presence or absence of the net. A significant difference ($\alpha = 0.01$) was detected between the abundance of impinged white perch and striped bass at

Unit 1 and Unit 2 when no barrier net was in place (Table VI-25). Unit 1 impinged fewer white perch and striped bass than Unit 2. A ratio of the mean abundance of fish collected at Unit 1 divided by the mean abundance of fish collected at Unit 2 was calculated to provide an indication of the magnitude and direction of the difference between units. The ratio was 0.29 for white perch and 0.23 for striped bass.

After the installation of the 1.27-cm mesh barrier net at Unit 2, more white perch and striped bass were impinged at Unit 1 than at Unit 2 (Table VI-25), that difference also being significant ($\alpha = 0.05$) for both white perch and striped bass. The ratio of Unit 1 mean impingement abundance to Unit 2 mean impingement abundance was 1.43 for white perch and 2.92 for striped bass.

With the installation of the 0.95-cm mesh barrier net at Unit 1, the abundance of white perch and striped bass impinged at Unit 2 was significantly greater ($\alpha = 0.01$) than Unit 1 (Table VI-25). The ratio of Unit 1 mean impingement abundance to Unit 2 mean impingement abundance was 0.38 for white perch and 0.38 for striped bass.

(b) Comparison of Mean Total Length of White Perch and Striped Bass at Unit 1 and Unit 2

An examination of mean total lengths for white perch and striped bass shows that before the installation of the 1.27-cm mesh barrier net at Unit 2, the mean total length of fish collected was slightly greater at Unit 2 than at Unit 1 (Figure VI-4). After the installation of the barrier net at Unit 2, the situation was reversed and the mean total lengths of white perch and striped bass collected at Unit 1 generally exceeded the lengths of those collected on Unit 2.

TABLE VI-25

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE[a] OF WHITE PERCH AND STRIPED BASS
AT UNIT 1 AND UNIT 2 DURING BARRIER NET STUDY

BOWLINE POINT GENERATING STATION - 1976-1977

		UNIT 1		UNIT 2			RATIO
SPECIES	n[b]	NET CONFIGURATION	MEAN ABUNDANCE	NET CONFIGURATION	MEAN ABUNDANCE	t[c]	MEAN ABUNDANCE UNIT 1 / MEAN ABUNDANCE UNIT 2
White Perch	29	No Net	265.38	No Net	915.63	-2.81**	0.29
	37	No Net	922.13	1.27-cm	646.19	2.15*	1.43
	19	0.95-cm	42.15	1.27-cm	110.66	-5.28**	0.38
Striped Bass	22	No Net	21.48	No Net	93.55	-2.85**	0.23
	37	No Net	115.98	1.27-cm	39.69	2.25*	2.92
	11	0.95-cm	4.32	1.27-cm	11.46	-3.06**	0.38

*Significant difference at = 0.05
**Significant difference at = 0.01

[a]Number of fish per million cubic meters

[b]Number of paired samples

[c]t = two sides paired t test (Snedecor and Cochran, 1974)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN TOTAL LENGTH FOR WHITE PERCH AND STRIPED BASS AT UNIT 1 AND UNIT 2

BOWLINE POINT GENERATING STATION 1976 - 1977

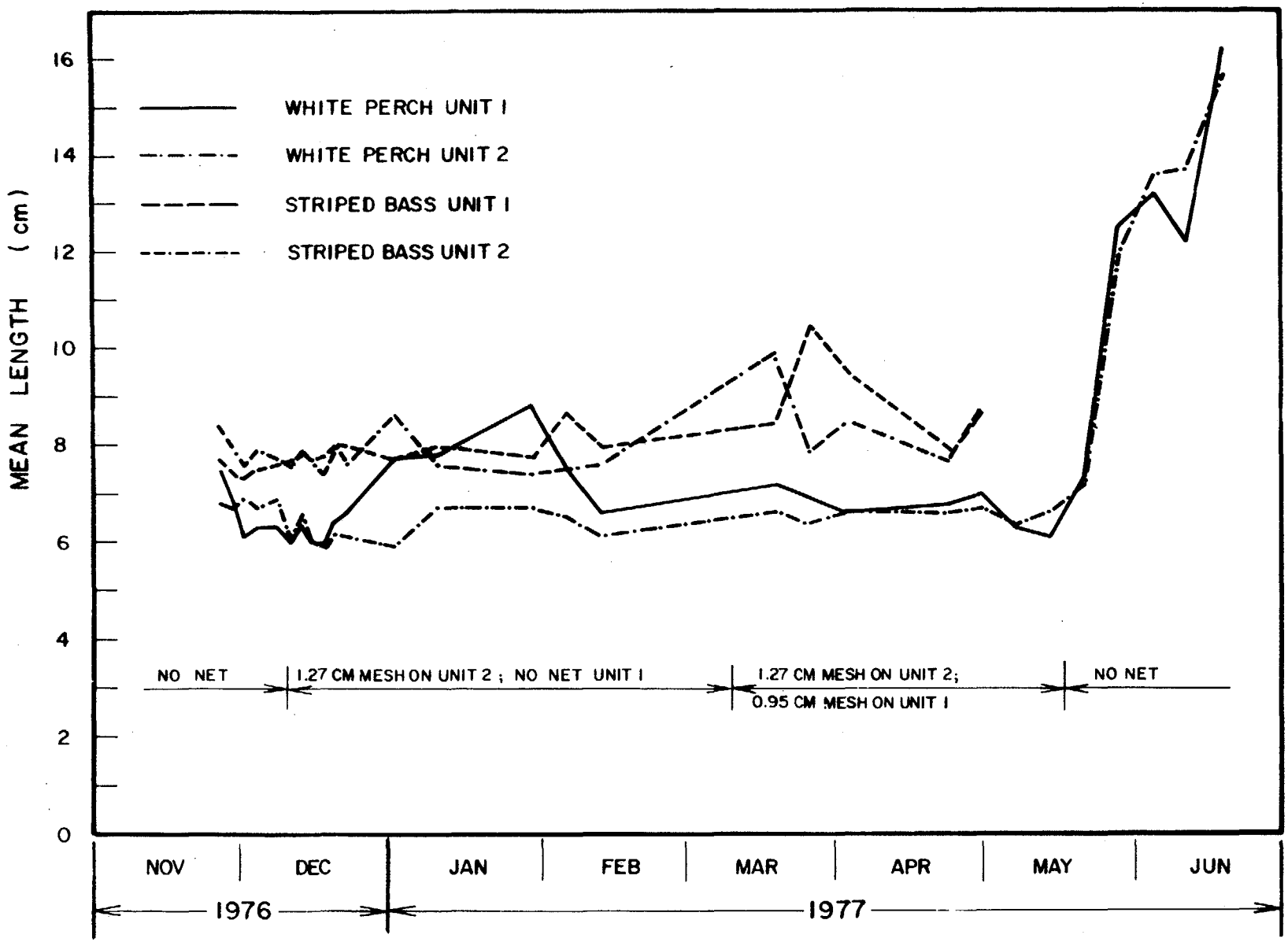


FIGURE VI-4

Only white perch were collected in sufficient numbers to permit a comparison between the mean lengths of fish collected at Unit 1 with the 0.95-cm mesh net and at Unit 2 with the 1.27 cm-mesh barrier net installed. The results of this comparison showed that the mean total length of white perch was initially greater at Unit 2, although by April and May, little difference existed between the two units (Figure VI-4).

After the nets were removed in May, the mean length of fish collected at both units increased, a pattern characteristically observed in late May through July in previous years (Figure VI-5).

(c) Tagging Studies of White Perch and Striped Bass

The total percentage recovery of all tagged fish was 20.8% from the study with the 1.27-cm mesh barrier net deployed in front of Unit 2 and 13.8% in a subsequent study with the 0.95-cm mesh barrier net deployed in front of both Unit 1 and 2 (Table VI-26).

With the 1.27-cm mesh net in place at Unit 2, 60.0% of the total fish recaptured, had been released from the Unit 1 (no net) side, 18.5% from outside the central buoy and 21.5% from outside the net along the Unit 2 side (Table VI-26). Recapture from the Unit 1 release site was approximately 2.5 times greater than from either the central buoy or the Unit 2 release sites.

Tagging studies conducted with the 0.95-cm mesh barrier net deployed in front of both Unit 1 and Unit 2 indicated that, 23.3% of the total fish recaptured had been released just outside of the net while 76.7% had been released inside of the net at the central buoy. Of the 1148 fish released

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

MEAN LENGTH OF WHITE PERCH IN IMPINGEMENT COLLECTIONS

BOWLINE POINT GENERATING STATION–1973 - 1977

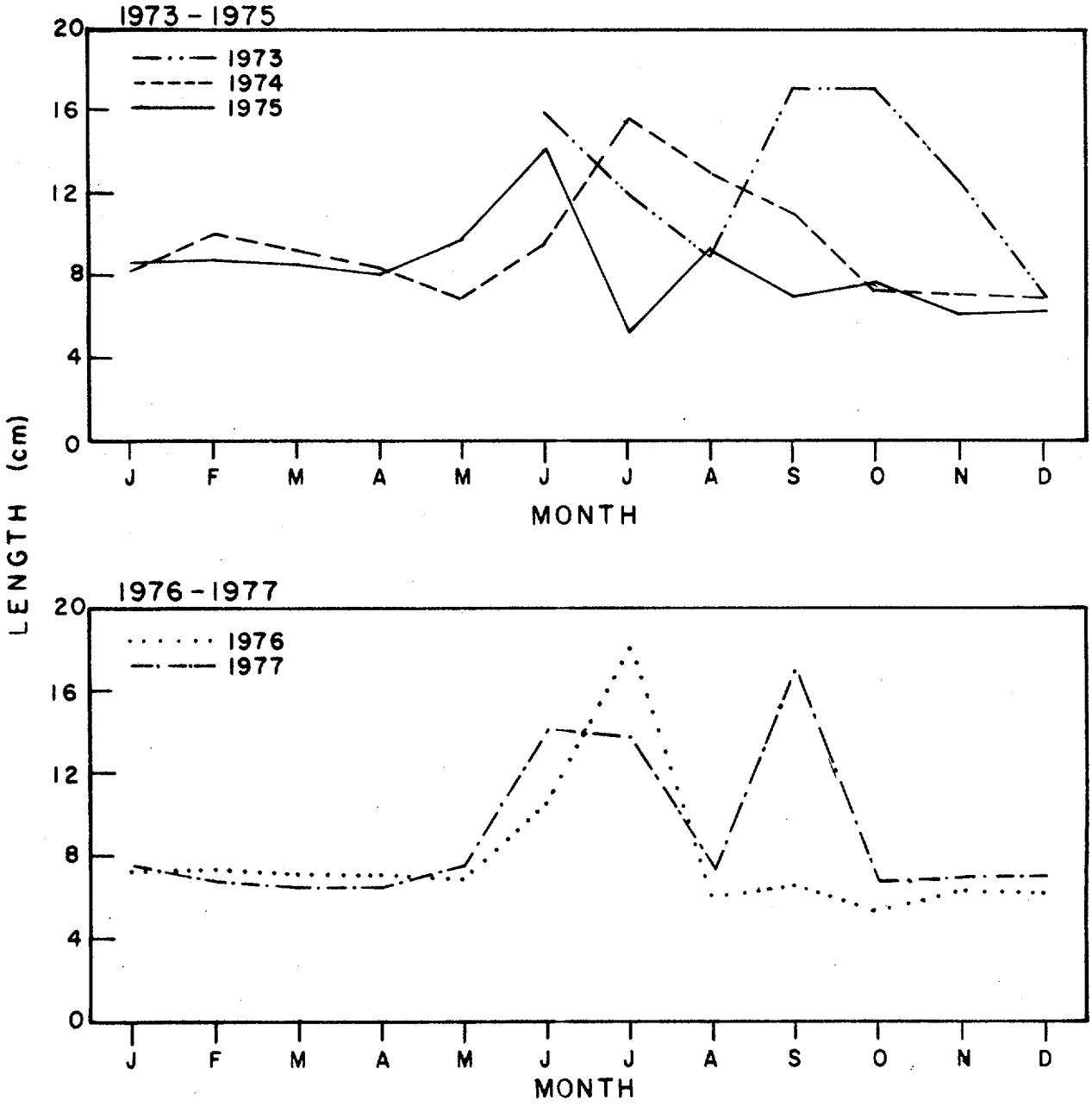


TABLE VI-26

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

RECOVERY OF TAGGED FISH DURING BARRIER NET STUDIES

BOWLINE POINT GENERATING STATION - 1977

I. 1.27-cm MESH BARRIER NET AT UNIT 2 AND NO NET AT UNIT 1
(JANUARY 1977-MARCH 1977; 3 RELEASE DATES)

	NUMBER RELEASED	NUMBER RECAPTURED	% RECAPTURED	NUMBER RECAPTURED AS A PERCENTAGE TOTAL RECAPTURED
UNIT 1 (NO NET)	112	39	34.8	60.0
UNIT 2 (OUT)	113	14	12.4	21.5
BUOY (OUT)	87	12	13.8	18.5
TOTAL	312	65	20.8	100.0

II. 0.95-cm MESH BARRIER NET AT UNIT 1 AND UNIT 2
(DECEMBER 1977-MAY 1978; 10 RELEASE DATES)

	NUMBER RELEASED	NUMBER RECAPTURED	% RECAPTURED	NUMBER RECAPTURED AS A PERCENTAGE TOTAL RECAPTURED
UNIT 1 (OUT)	354	19	5.4	9.0
UNIT 2 (OUT)	352	7	2.0	3.3
BUOY (OUT)	442	23	5.2	11.0
BUOY (IN)	374	161	43.0	76.7
TOTAL (IN AND OUT)	1522	210	13.8	100.0

OUT = Released outside of the net
IN = Released inside of the net

outside of the net, only 49 or 4.3% were recovered as compared to a 43.0% recovery (161 recoveries out of 374 released) from inside the net.

(d) Comparison of White Perch and Striped Bass Beach Seine and Impingement Collections 1973-1978 and Impingement Collections at Indian Point 1973-1978

A general pattern of white perch and striped bass catch per seine haul for beach seines in Bowline Pond is evident in Figure VI-6. Beach seine catches peak in the period from May through October with a general bimodal distribution evident. Two impingement peaks occur between November and April coincident with the movement of young-of-the-year white perch and striped bass out of the shoal areas (Figure VI-7 and VI-8). One peak occurs in December or January and the other in April. It can be noted that no peak occurred in April of 1977, when 1.27-cm mesh and 0.95-cm mesh barrier nets were in place at Unit 2 and Unit 1, respectively.

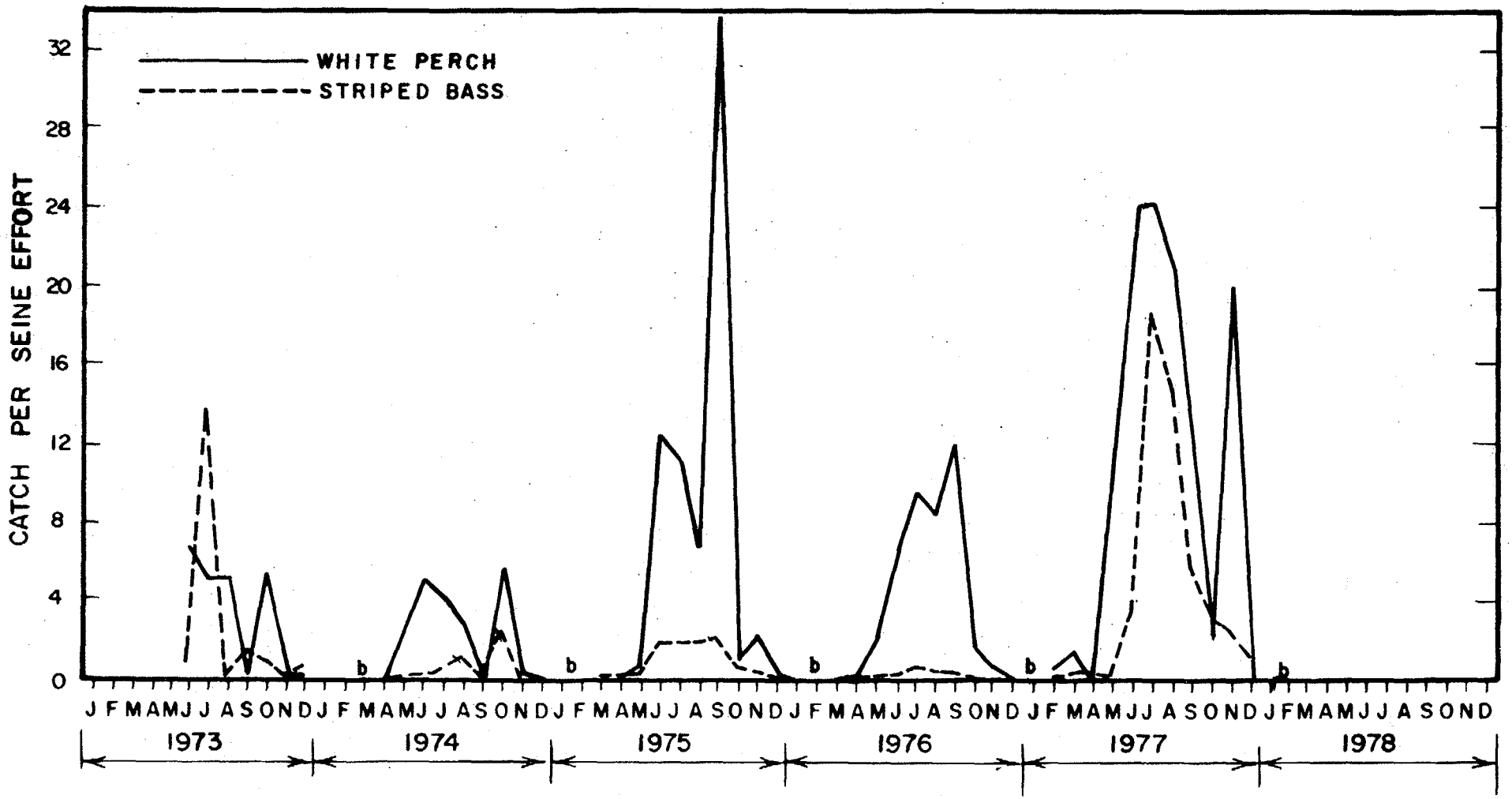
Impingement throughout the winter of 1977-1978, when the 0.95 cm mesh barrier net enclosed both units, remained extremely low despite indication from the beach seine catches during the previous summer of large white perch and striped bass year classes (Figure VI-6).

The white perch and striped bass abundance in Haverstraw Bay can be further documented through impingement records of the Indian Point Generating Station (km 69) (Figures VI-7,8). These values represent actual numbers collected per month at the plant. It is evident that the levels of white perch and striped bass impingement have remained similar through all years, although periods of striped bass impingement have been more variable.

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WHITE PERCH AND STRIPED BASS CATCH PER SEINE EFFORT FOR BOWLINE POND[a] COLLECTIONS

BOWLINE POINT GENERATING STATION—1973-1978



a. MEAN OF STATIONS BPI, BPN AND BPSS
b. SEINES NOT SAMPLED

FIGURE VI-6

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

IMPINGEMENT RATES FOR WHITE PERCH

INDIAN POINT AND BOWLINE POINT GENERATING STATIONS—1973-1978

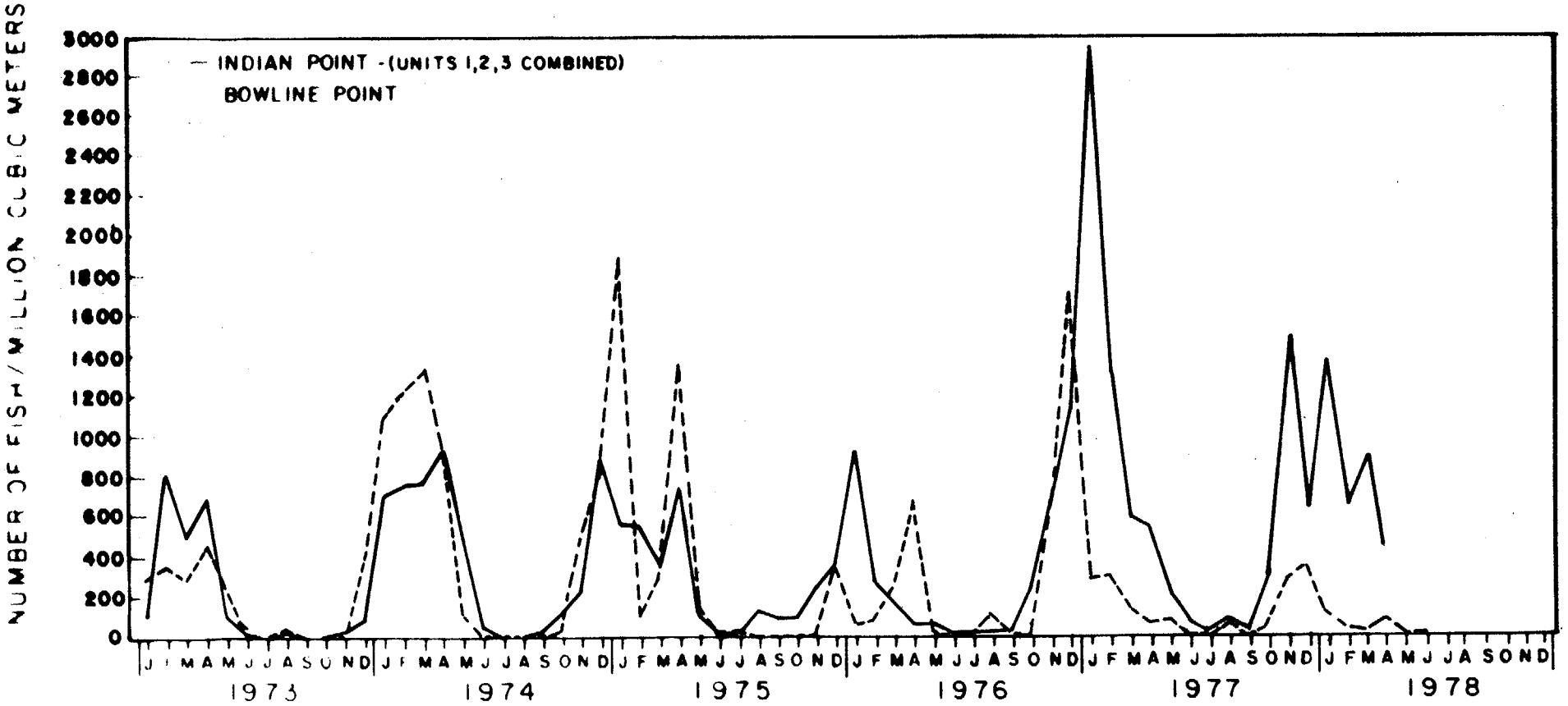


FIGURE VI-7

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

IMPINGEMENT RATES FOR STRIPED BASS

INDIAN POINT AND BOWLINE POINT GENERATING STATIONS—1973-1978

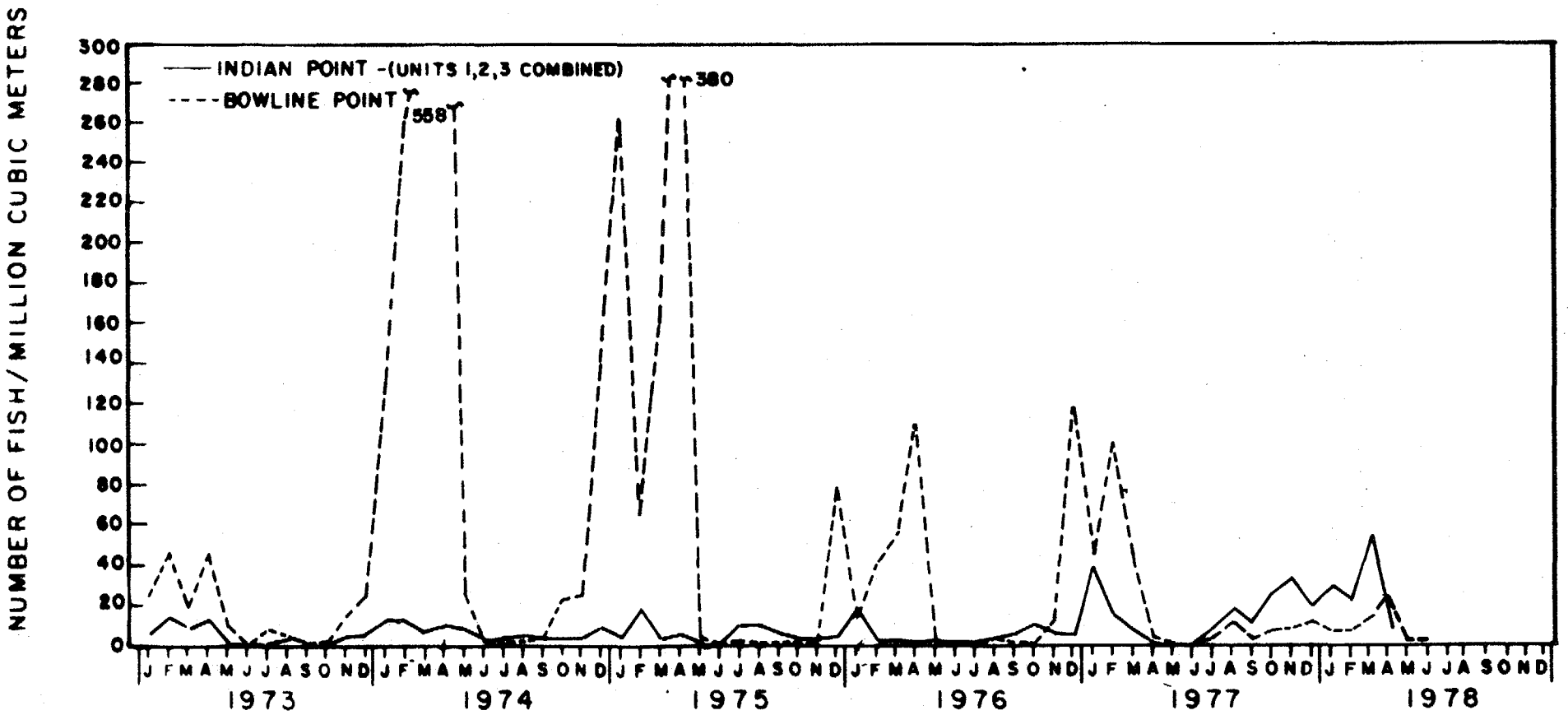


FIGURE VI-8

Simultaneous deployment of a 0.95-cm mesh monofilament gill net and a section of 0.95-cm mesh multifilament barrier net indicated that gilling on the multifilament net has been insignificant. Inspection of the net by divers as well as by field crews retrieving portions of the net also indicates that gilling or impingement is not significant.

Clogging of the net by debris or detritus was not found to be a problem. Several inspections by a diver were considered necessary, and weights were added as needed to insure that the net remained deployed on the bottom. Also, the diver inspected the net for holes and debris build-up.

(iv) Discussion

The information collected to date indicates that the deployment of a barrier net at the Bowline Point plant intake effectively reduces impingement of white perch and striped bass. The comparison of the numbers of white perch and striped bass impinged at Unit 1 and Unit 2 shows that the barrier net effectively guided fish from one unit to the other. With no net in place at the plant intake, Unit 2 impinged greater numbers of fish than Unit 1. Installation of the 1.27-cm mesh net in front of Unit 2 apparently caused a shift in impingement to Unit 1 by a factor of 1.4 for white perch and 2.9 for striped bass. When the 0.95-cm mesh barrier net was placed in front of Unit 1, greater impingement occurred at Unit 2 (Table VI-25).

A similar pattern for mean total lengths was evident for white perch and striped bass collected from the two units. Larger fish tended to be impinged on the Unit 2 screens before the 1.27-cm mesh barrier net was installed at Unit 2,

whereas after this installation, larger fish were impinged at Unit 1. Once the 0.95-cm mesh barrier net was in place at Unit 1, the Unit 1 lengths were reduced and were comparable to the mean total lengths at Unit 2 (Figure VI-4). It would be expected that larger fish would generally be excluded from the intake. There is, however, no apparent trend from 1975 to 1978 data which would indicate a general reduction in the average size of the individual impinged. Since the majority impinged are fish in the 7-9 cm size range (Figure VI-5), a quantifiable reduction in average size would be difficult to detect. More likely, a random portion of the fish population will get under or over the net.

The results of the tagging studies indicate that during the evaluation of the 1.27-cm mesh barrier net at Unit 2, 2.5 times more fish were recovered of those released at Unit 1 than those released at the central buoy or outside of the net (Table VI-26). After the 0.95-cm mesh barrier net was deployed in front of Unit 1 and Unit 2, approximately ten times more fish released inside the net were recovered than those released outside of the net.

A comparison of the historical pattern of white perch and striped bass impingement at the intake and the catch per effort of these species in Bowline Pond beach seines indicates that peak seine catches occurred between the months of May and October, while impingement rates peaked in December or January and April (Figure VI-6, VI-7, and VI-8). The deployment of the 1.27-cm mesh net at Unit 2 and the 0.95-cm mesh net at Unit 1 may have caused the reduction in the characteristic impingement peak in April 1977. The placement of the 0.95-cm mesh net at Unit 1 and Unit 2 in 1977

and 1978 most probably explains the lack of a large impingement peak for both white perch and striped bass in December 1977 or January and April 1978. From the catch per seine haul in Bowline Pond beach seines during 1975, 1976, and 1977, it is evident that the near field abundance levels have been variable in each year, with the 1977 catch per unit effort being the highest on record.

Examination of the Indian Point plant impingement data indicates that the white perch and striped bass impingement rates have also been variable since 1973. The white perch impingement rates for the winters of 1976-1977 and 1977-1978 and the striped bass impingement rates for the winter of 1977-1978 would indicate that those year classes were large. It is evident from this data that striped bass and white perch abundance was high in Haverstraw Bay throughout the study period although the white perch and striped bass impingement collections at the Bowline Point plant during deployment of the barrier net in 1978 were the lowest recorded rates.

Water velocities through the net have been measured and found to be lower than the velocities in the immediate vicinity of the traveling screens. It is therefore probable that in such low water velocities fish would be capable of detecting and avoiding the barrier net. Therefore deployment of the net at an angle to the current directs the fish away from the face of the intake.

The barrier net has been demonstrated to be a cost effective method of reducing the impingement rate at the Bowline Point Generating Station. The reduction in such rates would result in a considerable reduction in the total annual impingement of white perch and striped bass.

D. SUMMARY

Many factors must be considered before attempting to interpret the data collected. Sampling frequency can be expected to affect the final impingement estimates, and the range of frequencies employed in the five years of impingement sampling has been great (Table VI-27). During 1977, 37% of the days were sampled for impingement; the percentage of the total plant flow sampled for this period was 34% (Table VI-27). High percentages of days and flows were sampled as a result of extra sampling conducted to evaluate the performance of the barrier net.

Impingement sampling has been stratified by time in an attempt to provide weekly estimates. While the days selected for impingement sampling were not initially chosen at random, the events occurring in the river which influence the impingement process are not known to be related in any way to the sequence of calendar days.

Screen collection efficiency was addressed in 1976 and 1977 with preliminary indications of high collection efficiencies, possibly with seasonal variation. Late fall/early winter samples provided lower return efficiencies, while winter and spring collections consistently produced high return efficiencies.

The impingement process has been found to be selective on the younger fish, primarily fish in their first year. Although the impingement rate has varied by season and year, there has been a decrease in the impingement rate from the first full year of operation (1975).

Relative species abundance has remained relatively stable throughout the past five years of plant operation. White perch consistently are the dominant species impinged, followed by an assemblage of rainbow smelt, striped bass, and blueback herring.

TABLE VI-27

ORANGE AND ROCKLAND UTILITIES, INC.

BOWLINE POINT GENERATING STATION - 1973-1977

TOTAL FLOW SAMPLED PER MONTH, TOTAL PLANT FLOW PER MONTH AND PERCENTAGE SAMPLED

	1973			1974			1975			1976			1977		
MONTH	TOTAL PLANT FLOW*	TOTAL FLOW SAMPLED*	PERCENT OF FLOW SAMPLED	TOTAL PLANT FLOW*	TOTAL FLOW SAMPLED*	PERCENT OF FLOW SAMPLED	TOTAL PLANT FLOW*	TOTAL FLOW SAMPLED*	PERCENT OF FLOW SAMPLED	TOTAL PLANT FLOW*	TOTAL FLOW SAMPLED*	PERCENT OF FLOW SAMPLED	TOTAL PLANT FLOW*	TOTAL FLOW SAMPLED*	PERCENT OF FLOW SAMPLED
JAN	57.4690	9.0670	15.8	53.4540	5.1669	9.7	92.8911	18.1846	19.6	47.6958	5.7004	12.0	84.9255	61.6954	72.6
FEB	45.7130	3.8156	8.3	38.5292	1.7223	4.5	75.6405	8.9566	11.8	40.1217	5.5155	13.7	78.4420	30.8866	39.4
MAR	15.5009	0.8312	5.4	53.3383	5.1669	9.7	81.3466	11.2289	13.8	53.2726	11.8528	22.2	85.8366	32.7386	38.1
APR	51.6698	3.8273	7.4	61.6821	4.4048	7.1	84.0451	12.8402	15.3	83.0424	34.5982	41.7	86.4595	22.4497	26.0
MAY	62.4725	4.4811	7.2	31.7333	5.1669	16.3	54.5796	5.6809	10.4	86.8466	19.2351	22.1	93.2592	38.7829	41.6
JUN	41.3622	3.6847	8.9	76.9419	13.8643	18.0	81.3308	9.3501	11.5	87.8168	23.5288	26.8	79.4529	33.3976	42.0
JUL	50.3583	6.8884	13.7	100.9614	13.1256	13.0	93.8066	15.3463	16.4	106.0241	10.3188	9.7	64.2612	8.1522	12.7
AUG	59.9443	4.9285	8.2	108.3988	14.3156	13.2	105.5763	10.1666	9.6	95.5260	13.0408	13.7	117.8625	19.8479	16.8
SEP	60.0243	14.3027	23.8	117.8748	11.9118	10.1	102.7738	13.7562	13.4	98.6509	15.8911	16.1	86.3295	5.4554	6.3
OCT	64.8816	4.1862	6.5	126.0727	20.2464	16.1	57.5207	10.3339	18.0	45.9494	10.4905	22.8	103.4411	42.7740	41.4
NOV	52.6014	6.2793	11.9	87.2041	11.8829	13.6	51.6698	6.9132	13.4	53.9931	37.2253	68.9	84.0606	28.0150	33.3
DEC	48.4107	3.8153	7.9	106.5984	13.5012	12.7	88.2077	13.4825	15.2	87.2888	61.3807	70.3	86.3933	36.2086	41.9
TOTAL	610.4080	66.1073	10.8	962.7890	120.4756	12.5	969.3886	136.2400	14.0	886.2282	248.7780	24.2	1050.7239	360.4039	34.3

*Million cubic meters

BIBLIOGRAPHY

American Public Health Association (APHA). 1975. Standard methods for the examination of water and wastewater. 14th ed. Amer. Public Health Assoc., Amer. Water Works Assoc. and Water Pollut. Contr. Fed., Washington, D.C.

Hile, R. 1948. A monograph for the computation of the growth of fish from scale measurements. Trans. Amer. Fish. Soc. 78:156-162.

Lawler, Matusky & Skelly Engineers. 1974. 1973 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engineers. 1975. 1974 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engineers. 1976. 1975 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engioneers. 1977. 1976 Hudson River aquatic ecology studies - Bowline Point and Lovett Generating Stations. Prepared for Orange and Rockland Utilities, Inc.

McFadden, J.T. (ed.) 1977. Influence of Indian Point Unit 2 and other steam electric generating plants on the Hudson River Estuary, with emphasis on striped bass and other fish populations. Prepared for Consolidated Edison Company of New York Inc.

McFadden, J.T. and J.P. Lawler. 1977. Supplement I to influence of Indian Point Unit 2 and other steam electric generating plants on the Hudson River Estuary, with emphasis on striped bass and other fish populations. Prepared for Consolidated Edison Company of New York, Inc.

New York State Department of Environmental Conservation (NYSDEC). Official compilation of codes, rules and regulations. Environ. Rept. 861:0501-0509.

Orange and Rockland Utilities, Inc. [O&R]. 1977. Bowline Point Generating Station: Near-field effects of once-through cooling system operation on Hudson River biota. Orange and Rockland Utilities, Inc., Spring Valley, N.Y.

Quirk, Lawler & Matusky Engineers. 1974 Hudson River aquatic ecology studies at Bowline - Bowline Unit 1 pre-operational studies. Prepared for Orange and Rockland Utilities, Inc.

BIBLIOGRAPHY
(Continued)

Sawyer, C. 1966. Basic concepts of eutrophication. J. Water Pollut. Contr. Fed. 38(5):737-744.

U.S. Environmental Protection Agency. 1974. Methods for chemical analysis of water and wastes. Environmental monitoring and support lab., Cincinnati. EPA 625/6-74-003.

Report ORU74D3

LOVETT GENERATING STATION
ENTRAINMENT ABUNDANCE
STUDIES

1977 ANNUAL REPORT

Prepared for

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared by

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

August 1978

CONTENTS

	Page
1. INTRODUCTION	1-1
2. SUMMARY	2-1
3. METHODS AND MATERIALS	3-1
3.1 CONTINUOUS AUTOMATED SAMPLING SYSTEM	3-1
3.2 SAMPLE PROCESSING	3-1
4. RESULTS AND DISCUSSION	4-1
4.1 SPECIES COMPOSITION AND ABUNDANCE	4-1
4.1.1 Selected Species	4-1
REFERENCES	

LIST OF FIGURES

Number	Title
1-1	Schematic diagram of the intake and discharge locations at the Lovett plant.
3-1	Schematic diagram of the automated abundance sampler.
4-1	Daily densities of fish larvae and juveniles collected at the Lovett plant discharge during 1977.
4-2	Length-frequency distributions of fish larvae collected at the Lovett plant Unit 5 discharge, 26 May - 30 August 1977.

LIST OF TABLES

Number	Title
3-1	Summary of primary changes in the entrainment abundance sampling program at the Lovett plant between 1975 and 1977.
3-2	List of primary literature sources used in laboratory identification of ichthyoplankton.
4-1	Number and percent composition by life stage of ichthyoplankton collected during sampling at the Lovett plant discharge, 1977.
4-2	Density of bay anchovy by sample and life stage in 24-hour entrainment collections from the Lovett plant discharge during 1977.
4-3	Bay anchovy length-frequency distribution and mean, range, and standard deviation of lengths on a weekly basis for pump collections at the Lovett plant discharge, 1977.
4-4	Density of clupeids by sample and life stage in 24-hour entrainment collections from the Lovett plant discharge during 1977.
4-5	Clupeid length-frequency distribution and mean, range, and standard deviation of lengths on a weekly basis for pump collections at the Lovett plant discharge, 1977.
4-6	Density of white perch by sample and life stage in 24-hour entrainment collections from the Lovett plant discharge during 1977.
4-7	White perch length-frequency distribution and mean, range, and standard deviation of lengths on a weekly basis for pump collections at the Lovett plant discharge, 1977.
4-8	Density of striped bass by sample and life stage in 24-hour entrainment collections from the Lovett plant discharge during 1977.
4-9	Striped bass length-frequency distribution and mean, range, and standard deviation of lengths on a weekly basis for pump collections at the Lovett plant discharge, 1977.
4-10	Density of Atlantic tomcod by sample and life stage in 24-hour entrainment collections from the Lovett plant discharge during 1977.

CHAPTER 1: INTRODUCTION

The Lovett Generating Station is located on the west bank of the Hudson River estuary 67.5 km (MP 40.5) north of the southern tip of Manhattan. The river is 1.2 km wide and has a cross-sectional area of 15,000 m^2 in the vicinity of the Lovett plant. The Lovett plant is a five-unit, fossil-fueled steam electric generating plant with a total generating capability of 501 MWe. Unit 1 (19 MWe) became operational in February 1949, Unit 2 (20 MWe) in July 1951, Unit 3 (63 MWe) in March 1955, Unit 4 (197 MWe) in May 1966, and Unit 5 (202 MWe) in April 1969. The intake structure for each unit includes bar trash racks, vertical traveling screens, and two circulating water pumps. The maximum cooling water flow is 20 m^3/sec (316,000 gpm). Cooling water for each unit is drawn directly from the river. After passing through the condensers, the cooling water is discharged into the river at the shoreline (Figure 1-1).

Entrainment studies were conducted at the Lovett plant to identify and enumerate the ichthyoplankton populations entrained in the plant cooling water system. These studies were also designed to quantify the seasonal densities, species and life stage composition, and length-frequency distribution of entrained fish. Special emphasis was placed on striped bass (Morone saxatilis), white perch (M. americana), Atlantic tomcod (Microgadus tomcod), bay anchovy (Anchoa mitchilli), and members of the clupeid family such as American shad (Alosa sapidissima), alewife (Alosa pseudoharengus), and blueback herring (Alosa aestivalis)).

Because Units 4 and 5 are similar and account for a major portion of the generating capability of the Lovett plant, the Unit 5 discharge (which is more accessible) was used for sampling during 1977. Two 24-hour samples were collected weekly between 26 May and 30 August to provide entrainment abundance data during the spring and summer spawning seasons in the Hudson River. Continuous 24-hour sampling also permitted quantification of species which infrequently occurred in entrainment collections. The sampling season was scheduled to begin in February but was delayed because of a scheduled Unit 5 shutdown.

Physiochemical variables such as temperature and conductivity can influence the temporal and spatial occurrence of ichthyoplankton. The seasonal ambient river temperature profile is typical of a temperate estuary. Since the Lovett plant is located in the transitional portion of the estuary, conductivity is variable depending on freshwater flow and tidal mixing.

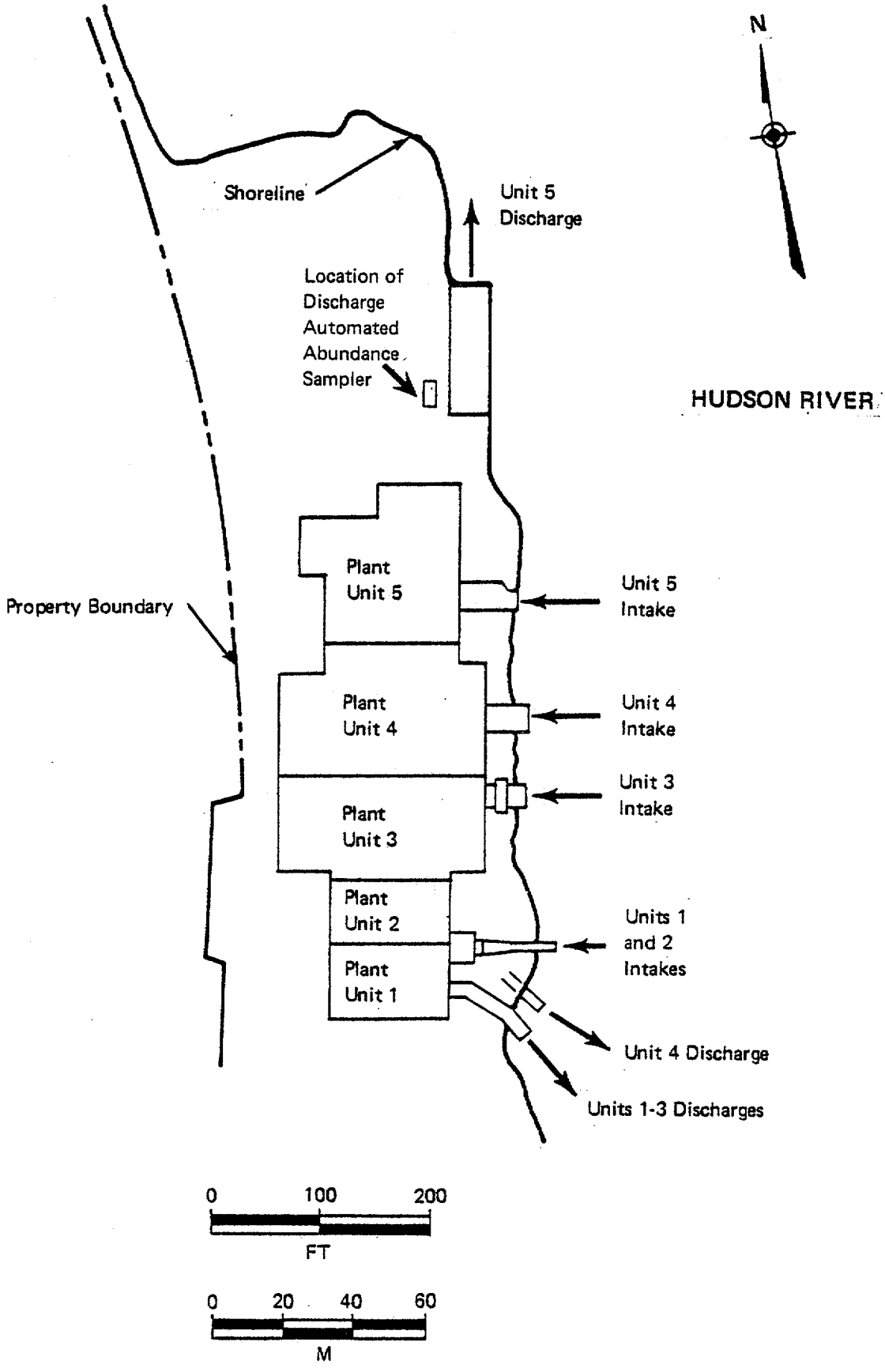


Figure 1-1. **Schematic diagram of the intake and discharge locations at the Lovett plant.**

CHAPTER 2: SUMMARY

Ichthyoplankton entrainment abundance was examined by means of an automated pump system at the Unit 5 discharge at the Lovett Generating Station. Bay anchovy larvae were the most abundant taxa collected (77.5 percent), and when combined with clupeids, white perch, and striped bass these species accounted for 92.6 percent of all collections.

Peak larval abundance for bay anchovy occurred in mid-July although abundance was relatively high from mid-June through early August. Peak white perch abundance occurred on 2 June. Striped bass larvae abundance peaked during the first half of June while peak juvenile abundance was observed in late June. Maximum concentrations of clupeids were observed on the first sample date, 26 May.

The length-frequency distributions of the four major groups of ichthyoplankton entrained at the Lovett plant were variable. White perch and bay anchovy exhibited bimodal peaks. The majority of the entrained organisms in the four most abundant groups were between 3.0 and 18.0 mm.

CHAPTER 3: METHODS AND MATERIALS

The studies described in this report represent the third year of abundance sampling by Ecological Analysts, Inc. for ichthyoplankton entrained at the Lovett plant. Several changes in sampling gear and frequency were initiated between 1975 and 1977 and are summarized in Table 3-1. These changes primarily reflect increased sampling effort during the period of peak abundance and development of an automated sampling pump system used at the Unit 5 discharge.

3.1 CONTINUOUS AUTOMATED SAMPLING SYSTEM

Samples were collected from the Lovett Unit 5 discharge canal using the automated abundance sampler (Figure 3-1). Water was pumped into the system using a 7.6-cm (3-in.) electric pump which collected water via a line inserted to a depth of 1.5 m in the discharge canal. Samples were collected for 24 continuous hours in a tank-net system, composed of an inverted 505-μ mesh plankton net mounted in a tank 1.0 m in diameter and 1.2 m in depth. The pump automatically shut down every hour while the net rinsed. This rinse cycle lasted approximately 2 minutes. After each rinse, the sample was concentrated in a secondary unit. The concentrated sample was then collected in a cylindrical cod-end container and refrigerated at 0-1 C until the end of the sampling period. After each 24-hour sample was terminated, the sample was promptly transferred to a labeled 800-ml glass jar and preserved with 10 percent formalin. Sample volumes were measured with a calibrated 7.6-cm (3-in.) inline flowmeter. Sample duration and number of cycles were automatically registered by a mechanical recorder; 24-hour samples were a composite of 24 one-hour samples. Water quality analyses were performed at the initiation and termination of each 24-hour sample to monitor ambient water temperature, conductivity, dissolved oxygen, and pH.

3.2 SAMPLE PROCESSING

Samples were preserved onsite in separate 800-ml glass jars with 10 percent formalin and transported to laboratory facilities for initial work-up and quality control analysis. In the lab, samples were transferred to blackened pyrex trays, sorted, and enumerated by life stage. Ichthyoplankton specimens were removed from each sample, placed in vials according to life stage and preserved with 5 percent formalin. Each specimen from the vials was identified to the family or species level with emphasis on the most abundant species. Owing to the extreme difficulty involved in differentiating the early life stages of alewife and blueback herring, these two species have been grouped under the name clupeids. American shad and other species in the family Clupeidae were identified to the species level. Identification was facilitated by available literature (Table 3-2) and an ichthyoplankton reference collection.

The identification of rare or unusual specimens was verified by an ichthyoplankton taxonomy specialist. Length was measured on selected samples and species. Both sorting and identification were subjected to quality control procedures (proportion defective analysis). This is an acceptance sampling procedure which selects 7 out of 50 samples at random for rework. The procedure provides an average outgoing quality level (AOQL) of no more than 10 percent error rate.

TABLE 3-1 SUMMARY OF PRIMARY CHANGES IN THE ENTRAINMENT ABUNDANCE SAMPLING PROGRAM AT THE LOVETT PLANT BETWEEN 1975 AND 1977

Year	Station	Sampling Device	Sampling Season	Frequency of Samples	Diel[a] Sampling	Sample Duration (min)	Sample Depth[b]
1975	Intake	500-μ nets	FEB-SEP	1 day/week	N,S,M,S	5-90[c]	S-M-B
1976	Intake	505-μ nets	MAR-SEP	1 day/week	N,S,M,S	30	Concurrent S-M-B
	Intake	Pump-Net	FEB	1 day/week	N,S,M,S	30	Consecutive S-M-B
	Discharge	505-μ net	FEB	1 day/week	N,S,M,S	30	0
1977	Discharge	Auto-sampler (3-in. pump)	MAY-AUG	2 day/week	--	24 hr	0

(a) N,S,M,S - noon, sunset, midnight, sunrise.
(b) S,M.B - surface, middle, bottom.
(c) Sample duration was changed during the early part of 1975 to determine optimal duration which would minimize net clogging and maximize sample volume.

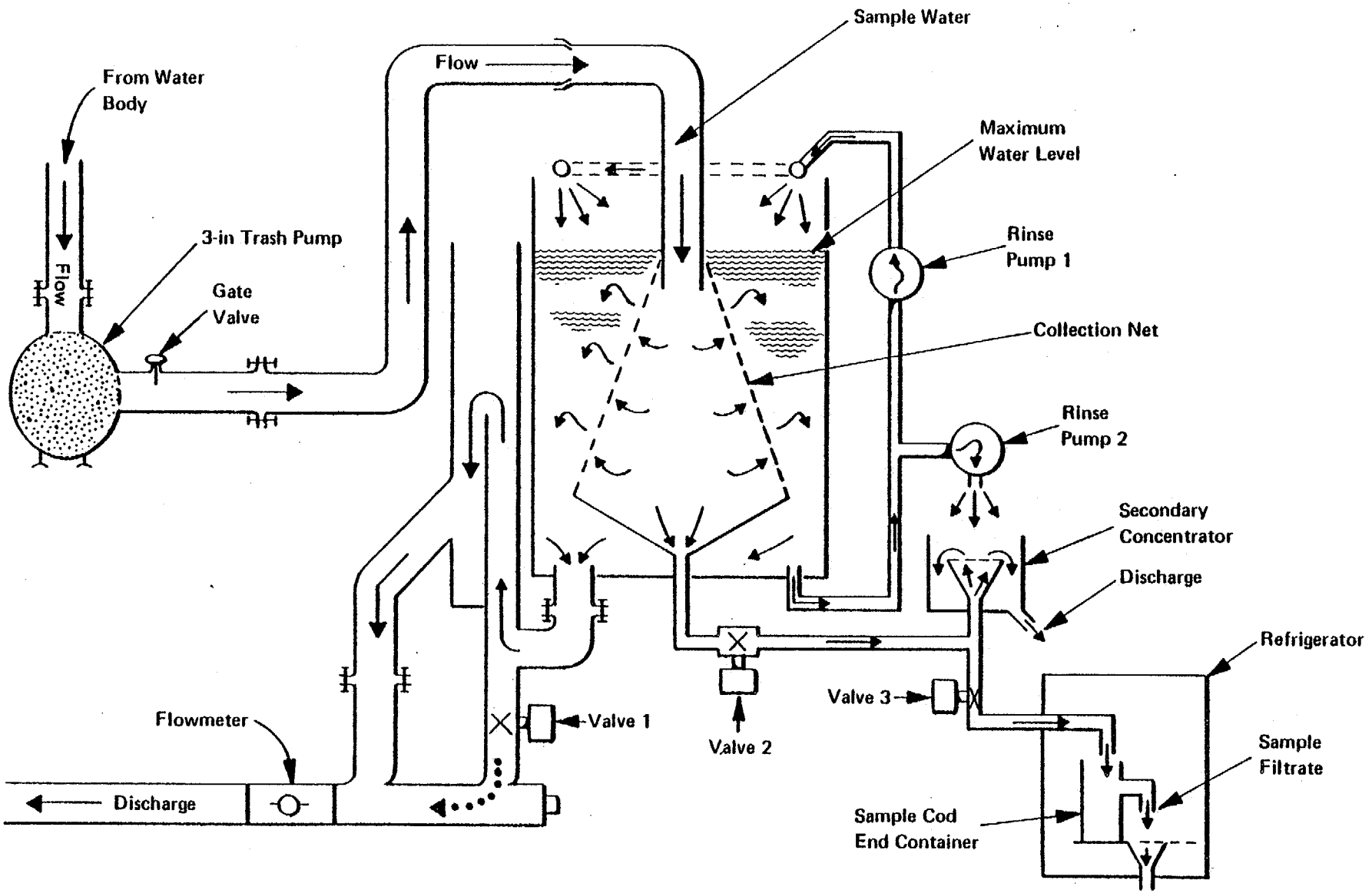


Figure 3-1. Schematic diagram of the automatic abundance sampler.

TABLE 3-2 LIST OF PRIMARY LITERATURE SOURCES USED IN LABORATORY IDENTIFICATION OF ICHTHYOPLANKTON

Chambers et al. 1969
Cianci 1969
Mansueti and Hardy 1967
Scotton et al. 1973
Leim 1924
Lippson and Moran 1974
Hildebrand and Schroeder 1928
Bigelow and Schroeder 1953
Booth 1967
Mansueti 1958
Bayless 1972
Doroshev 1970
Rathjen and Miller 1957
Dovel and Edmonds 1971
Krester 1968
Bath 1974
Wang and Kernehan (in press)

CHAPTER 4: RESULTS AND DISCUSSION

4.1 SPECIES COMPOSITION AND ABUNDANCE

Entrainment abundance and species composition were determined from the 24-hour samples collected at the discharge. Bay anchovy larvae accounted for 77.5 percent of all ichthyoplankton entrained during the 1977 sampling season (Table 4-1). The next three most abundant groups were clupeids, white perch, and striped bass. There were no Atlantic tomcod collected as a result of the delayed start of sampling while Unit 5 was out of service. Species and life stage abundance were comparable with those observed in 1975 and 1976 (Ecological Analysts 1976, 1977).

4.1.1 Selected Species

4.1.1.1 Bay Anchovy

Bay anchovy spawn throughout the summer and larvae were collected in relatively high numbers from late June through August (Table 4-2). Densities were variable throughout this period (Figure 4-1); however, peak concentrations were observed on 13 July (1,392/1,000 m^3). Larvae collected during this period ranged from 3 to 27 mm in length, although 52.0 percent of those measured were between 6 and 14 mm (Figure 4-2, Table 4-3). The variability observed in bay anchovy larval density and length distribution reflects the extended spawning season and the effect of salt-front movement on spawning location and larval distribution (Orange and Rockland Utilities 1978).

4.1.1.2 Clupeids

Members of the clupeid family (alewife and blueback herring) spawn primarily in the freshwater north of the Lovett site. The maximum concentrations were 53 larvae per 1,000 m^3 for the Lovett plant. Spawning of these two clupeids overlap temporally from April through June in the Hudson River. Clupeids were present in the May sample, and were collected through June (Figure 4-1, Table 4-4). Clupeid eggs were collected on 26 May at a density of 855/1,000 m^3. Maximum density of post-yolk-sac larvae also occurred on 26 May. Clupeid larvae collected ranged from 3 to 18 mm in length. There were not enough larvae collected to draw any conclusions from length-frequency distribution analysis (Figure 4-2, Table 4-5). No American shad were collected.

4.1.1.3 White Perch

White perch generally spawn in the Hudson River during May and June. Eggs were collected from 26 May to 9 June, with a maximum density of 14/1,000 m^3 occurring on 26 May. Post-yolk-sac larvae peaked on 2 June at a density of 75/1,000 m^3 (Figure 4-1, Table 4-6), and were collected until 13 July. White perch juveniles first appeared at the end of June, and were present in abundance collections until the end of July. White perch collected during this period ranged from 3 to 46 mm but larvae between 12.0 and 14.9 mm composed 38.0 percent of those measured (Figure 4-2, Table 4-7).

TABLE 4-1 NUMBER AND PERCENT COMPOSITION BY LIFE STAGE OF ICHTHYOPLANKTON COLLECTED DURING SAMPLING AT THE LOVETT PLANT DISCHARGE, 1977

Species	Life Stage[a]	Number Collected	Percent Composition
Bay anchovy	LAR	5,230	77.5
Clupeids	EGG	686	10.2
Unidentified*	LAR	402	6.0
White perch	LAR	93	1.4
Striped bass	LAR	66	1.0
Bay anchovy	EGG	56	0.8
Clupeids	LAR	41	0.6
Silversides	LAR	40	0.6
Morone spp.	LAR	26	0.4
Striped bass	JUV	24	0.4
White perch	EGG	12	0.2
Hogchoker	LAR	12	0.2
White perch	JUV	9	0.1
Northern pipefish	JUV	9	0.1
Minnows	LAR	6	0.1
American eel	JUV	5	0.1
Sunfishes	LAR	4	0.1
Unidentified*	EGG	4	0.1
Unidentified	EGG	4	0.1
Tessellated darter	YSL	3	0.0
Bay anchovy	JUV	3	0.0
Rainbow smelt	JUV	2	0.0
Killifishes	YSL	1	0.0
Morone spp.	JUV	1	0.0
Minnows	YSL	1	0.0
Rough silverside	EGG	1	0.0
Striped bass	YSL	1	0.0
Tessellated darter	LAR	1	0.0
Hogchoker	YSL	1	0.0
Weakfish	LAR	1	0.0

(a): EGG = Egg; LAR = Larvae; YSL = Yolk-Sac-Larvae; JUV = Juvenile.

Note: * indicates that organisms were damaged; greater than 70 percent of the damaged larvae occurred during the period of peak bay anchovy abundance. Abundance of other species collected in samples during this period was very low. Prior to 6 July Morone and clupeids were also abundant and the remaining damaged larvae were collected throughout this period.

TABLE 4-2 DENSITY OF BAY ANCHOVY BY SAMPLE AND LIFE STAGE IN 24-HOUR ENTRAINMENT COLLECTIONS FROM THE LOVETT PLANT DISCHARGE DURING 1977

Date	Time[a] (hr)	Tide (m)	Temperature (C)	Conductivity (μmho)	Sample Volume (m^3)	Density (No./1,000 m^3)				
						Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
26 MAY	1155	--	20.4	160	790.40	0.0	0.0	0.0	0.0	0.0
2 JUN	2000	--	22.0	--	53.70	0.0	0.0	0.0	0.0	0.0
8 JUN	1530	0.0	--	--	358.70	0.0	0.0	0.0	0.0	0.0
9 JUN	1321	--	--	--	302.10	0.0	0.0	0.0	0.0	0.0
17 JUN	1200	--	21.8	6,120	364.50	0.0	0.0	2.7	0.0	2.7
28 JUN	1256	-0.4	24.1	5,780	998.10	0.0	0.0	190.4	0.0	190.4
29 JUN	1305	--	27.2	5,480	981.90	0.0	0.0	339.1	0.0	339.1
5 JUL	1142	-0.8	26.7	2,700	921.30	0.0	0.0	175.8	0.0	175.8
6 JUL	1212	-0.6	27.9	3,010	882.70	0.0	0.0	477.0	0.0	477.0
12 JUL	0950	--	23.1	5,550	907.00	3.3	0.0	750.8	0.0	750.8
13 JUL	0940	--	25.0	7,000	854.40	5.9	0.0	1,391.6	0.0	1,391.6
20 JUL	1720	-0.6	--	--	763.70	0.0	0.0	665.2	1.3	666.5
21 JUL	1740	-0.4	--	--	776.00	0.0	0.0	281.0	0.0	281.0
25 JUL	1810	--	28.8	3,940	692.50	0.0	0.0	810.1	0.0	810.1
26 JUL	1652	-0.4	28.8	5,060	761.90	0.0	0.0	206.1	1.3	207.4
4 AUG	1542	0.1	27.4	6,000	744.70	0.0	0.0	116.8	0.0	116.8
8 AUG	1055	-0.7	29.8	5,520	714.30	0.0	0.0	191.8	1.4	193.2
9 AUG	1500	--	29.8	5,520	619.10	16.2	0.0	558.8	0.0	558.8
15 AUG	1650	-0.9	--	--	629.60	42.9	0.0	35.0	0.0	35.0
16 AUG	1655	-0.7	--	--	678.70	10.3	0.0	84.0	0.0	84.0
22 AUG	1535	-0.6	27.0	5,020	730.30	0.0	0.0	15.0	0.0	15.0
23 AUG	1625	-0.1	27.0	5,020	642.60	0.0	0.0	73.1	0.0	73.1
29 AUG	1122	0.0	27.7	4,880	674.70	0.0	0.0	86.0	0.0	86.0
30 AUG	1125	0.1	27.7	4,880	723.60	0.0	0.0	26.2	0.0	26.2

(a) Start time of sample.

Note: Dashes indicate data not available.

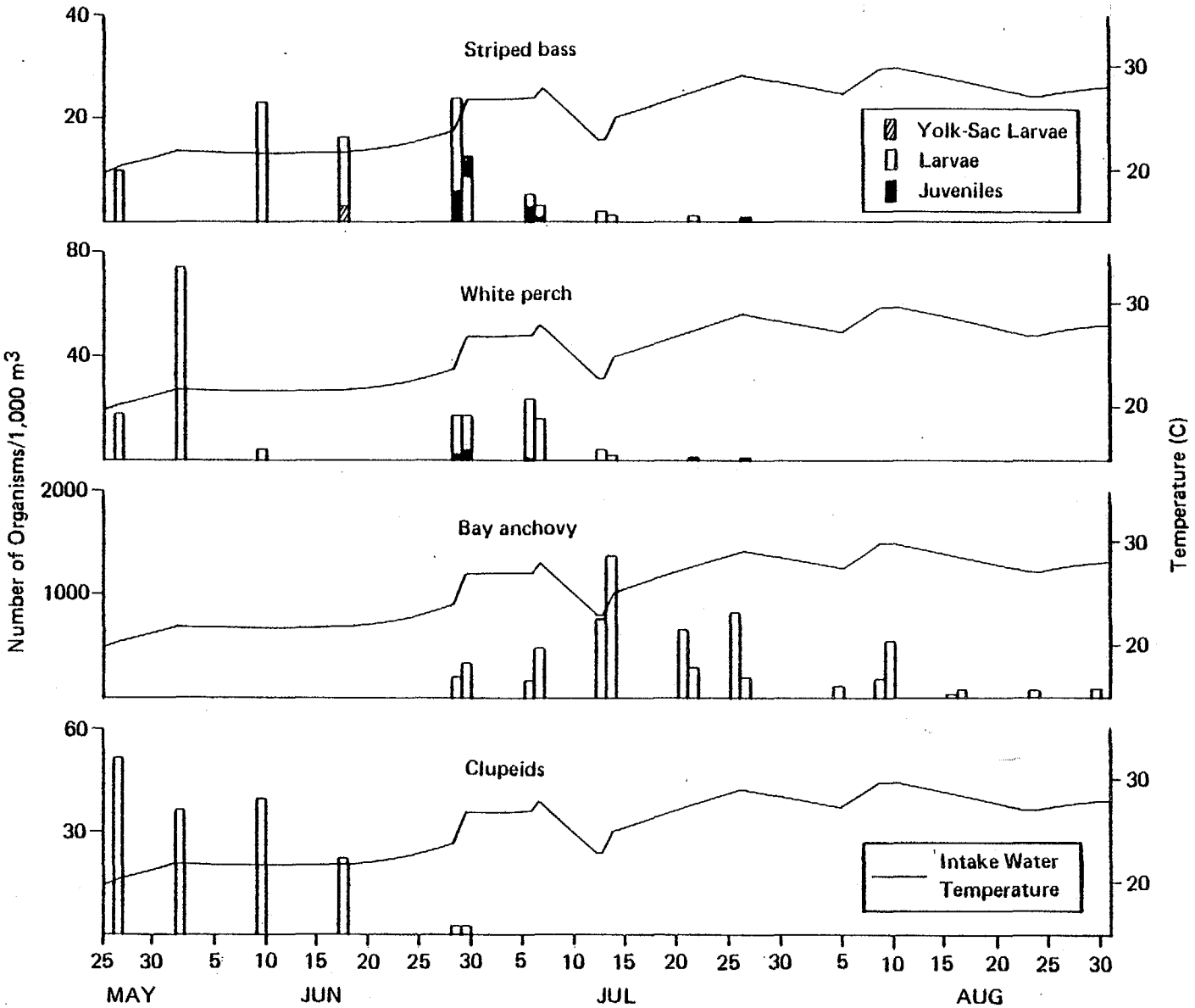


Figure 4-1. Daily densities of fish larvae and juveniles collected at the Lovett plant discharge during 1977.

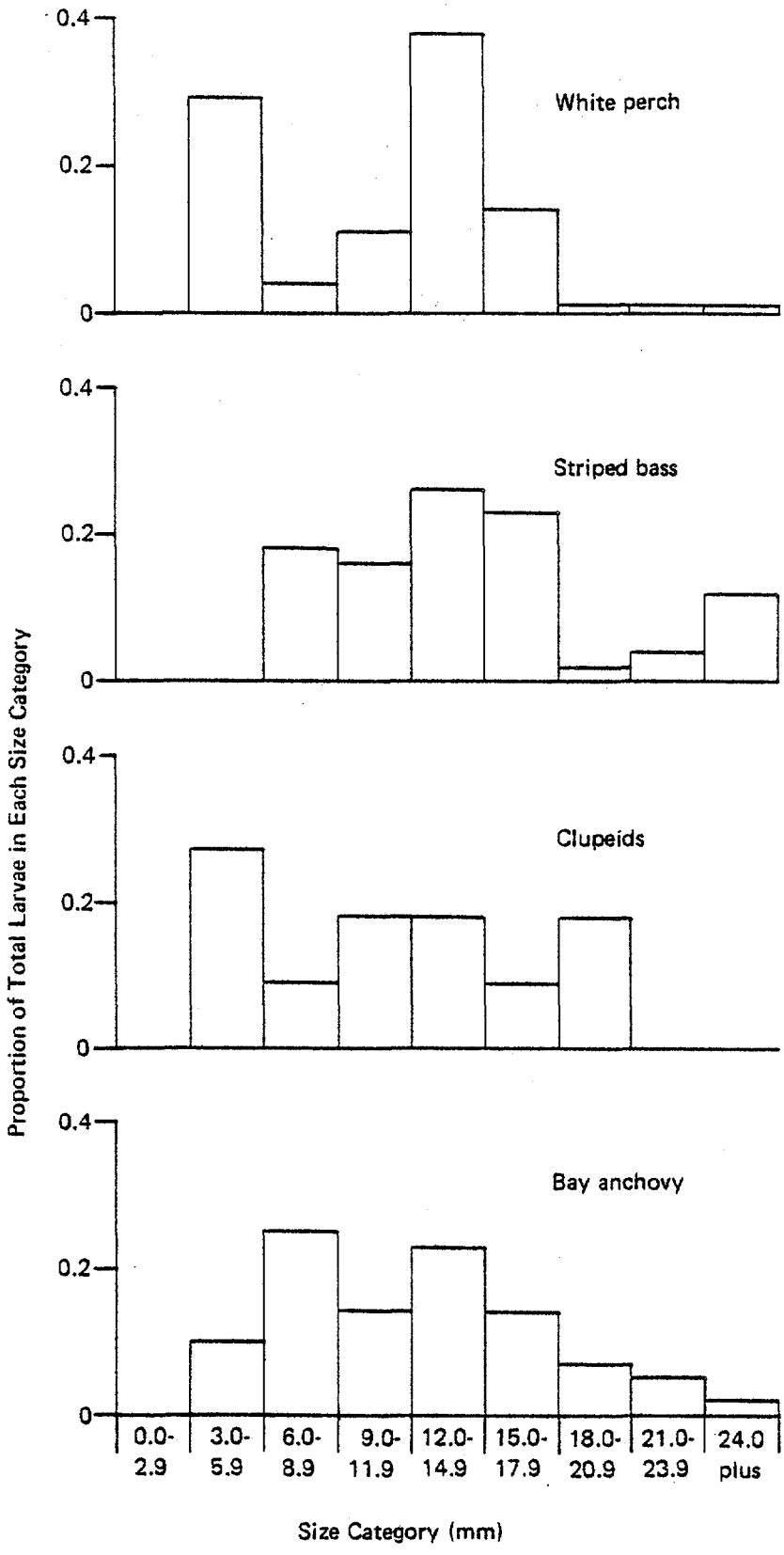


Figure 4-2. Length-frequency distributions of fish larvae collected at the Lovett plant Unit 5 discharge, 26 May – 30 August 1977.

TABLE 4-3 BAY ANCHOVY LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS ON A WEEKLY BASIS FOR PUMP COLLECTIONS AT THE LOVETT PLANT DISCHARGE, 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
26 MAY	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 JUN	1	6.0	0.0	0	0	1	0	0	0	0	0	0	6.0	6.0	6.0
29 JUN	50	7.8	5.1	0	23	12	2	5	5	3	0	0	3.0	6.0	20.0
6 JUL	50	12.1	4.9	0	0	17	9	8	7	5	4	0	6.0	11.0	22.0
13 JUL	50	13.5	4.2	0	2	4	7	20	10	4	1	2	4.0	14.0	24.0
21 JUL	26	14.2	3.7	0	0	2	3	10	7	2	2	0	8.0	14.0	22.0
26 JUL	30	10.8	5.5	0	2	11	5	7	1	1	2	1	5.0	9.5	27.0
4 AUG	25	13.6	3.8	0	0	4	2	9	7	1	2	0	7.0	14.0	22.0
9 AUG	28	14.6	4.6	0	0	3	6	5	4	7	3	0	6.0	14.5	22.0
16 AUG	7	11.0	6.1	0	1	1	3	1	0	0	0	1	5.0	9.0	25.0
23 AUG	32	8.8	3.9	0	2	18	5	4	2	0	1	0	5.0	7.0	22.0
30 AUG	8	10.6	5.8	0	0	5	0	2	0	0	0	1	6.0	7.5	24.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-4 DENSITY OF CLUPEIDS BY SAMPLE AND LIFE STAGE IN 24-HOUR ENTRAINMENT COLLECTIONS FROM THE LOVETT PLANT DISCHARGE DURING 1977

Date	Time[a] (hr)	Tide (m)	Temperature (C)	Conductivity (μmho)	Sample Volume (m^3)	Density (No./1,000 m^3)				
						Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
26 MAY	1155	--	20.4	160	790.40	855.3	0.0	53.1	0.0	53.1
2 JUN	2000	-0.9	22.0	--	53.70	0.0	0.0	37.2	0.0	37.2
8 JUN	1530	0.0	--	--	358.70	0.0	0.0	0.0	0.0	0.0
9 JUN	1321	--	--	--	302.10	0.0	0.0	39.7	0.0	39.7
17 JUN	1200	--	21.8	6,120	364.50	27.4	0.0	21.9	0.0	21.9
28 JUN	1256	-0.4	24.1	5,780	998.10	0.0	0.0	1.0	0.0	1.0
29 JUN	1305	--	27.2	5,480	981.90	0.0	0.0	1.0	0.0	1.0
5 JUL	1142	-0.8	26.7	2,700	921.30	0.0	0.0	0.0	0.0	0.0
6 JUL	1212	-0.6	27.9	3,010	882.70	0.0	-0.0	0.0	0.0	0.0
12 JUL	0950	--	23.1	5,550	907.00	0.0	0.0	0.0	0.0	0.0
13 JUL	0940	--	25.0	7,000	854.40	0.0	0.0	0.0	0.0	0.0
20 JUL	1720	-0.6	--	--	763.70	0.0	0.0	0.0	0.0	0.0
21 JUL	1740	-0.4	--	--	776.00	0.0	0.0	0.0	0.0	0.0
25 JUL	1810	--	28.8	3,940	692.50	0.0	0.0	0.0	0.0	0.0
26 JUL	1652	-0.4	28.8	5,060	761.90	0.0	0.0	0.0	0.0	0.0
4 AUG	1542	0.1	27.4	6,000	744.70	0.0	0.0	0.0	0.0	0.0
8 AUG	1055	-0.7	29.8	5,520	714.30	0.0	0.0	0.0	0.0	0.0
9 AUG	1500	--	29.8	5,520	619.10	0.0	0.0	0.0	0.0	0.0
15 AUG	1650	-0.9	--	--	629.60	0.0	0.0	0.0	0.0	0.0
16 AUG	1655	-0.7	--	--	678.70	0.0	0.0	0.0	0.0	0.0
22 AUG	1535	-0.6	27.0	5,020	730.30	0.0	0.0	0.0	0.0	0.0
23 AUG	1625	-0.1	27.0	5,020	642.60	0.0	0.0	0.0	0.0	0.0
29 AUG	1122	0.0	27.7	4,880	674.70	0.0	0.0	0.0	0.0	0.0
30 AUG	1125	0.1	27.7	4,880	723.60	0.0	0.0	0.0	0.0	0.0

(a) Sample start time.

Note: Dashes indicate data not available.

TABLE 4-5 CLUPEID LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS ON A WEEKLY BASIS FOR PUMP COLLECTIONS AT THE LOVETT PLANT DISCHARGE, 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
26 MAY	2	6.0	1.0	0	1	1	0	0	0	0	0	0	5.0	6.0	7.0
2 JUN	1	11.0	0.0	0	0	0	1	0	0	0	0	0	11.0	11.0	11.0
9 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
29 JUN	2	10.5	1.5	0	0	0	1	1	0	0	0	0	9.0	10.5	12.0
6 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
13 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
21 JUL	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
26 JUL	6	12.0	5.9	0	2	0	0	1	1	2	0	0	3.0	14.0	18.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
16 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
30 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-6 DENSITY OF WHITE PERCH BY SAMPLE AND LIFE STAGE IN 24-HOUR ENTRAINMENT COLLECTIONS FROM THE LOVETT PLANT DISCHARGE DURING 1977

Date	Time[a] (hr)	Tide (m)	Temperature (C)	Conductivity (µmho)	Sample Volume (m^3)	Density (No./1,000 m^3)				
						Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
26 MAY	1155	--	20.4	160	790.40	13.9	0.0	17.7	0.0	17.7
2 JUN	2000	-0.9	22.0	--	53.70	0.0	0.0	74.5	0.0	74.5
8 JUN	1530	0.0	--	--	358.70	0.0	0.0	0.0	0.0	0.0
9 JUN	1321	--	--	--	302.10	3.3	0.0	3.3	0.0	3.3
17 JUN	1200	--	21.8	6,120	364.50	0.0	0.0	0.0	0.0	0.0
28 JUN	1256	-0.4	24.1	5,780	998.10	0.0	0.0	17.0	2.0	19.0
29 JUN	1305	--	27.2	5,480	981.90	0.0	0.0	17.3	4.1	21.4
5 JUL	1142	-0.8	26.7	2,700	921.30	0.0	0.0	23.9	1.1	25.0
6 JUL	1212	-0.6	27.9	3,010	882.70	0.0	0.0	14.7	0.0	14.7
12 JUL	0950	--	23.1	5,550	907.00	0.0	0.0	3.3	0.0	3.3
13 JUL	0940	--	25.0	7,000	854.40	0.0	0.0	2.3	0.0	2.3
20 JUL	1720	-0.6	--	--	763.70	0.0	0.0	0.0	0.0	0.0
21 JUL	1740	-0.4	--	--	776.00	0.0	0.0	0.0	1.3	1.3
25 JUL	1810	--	28.8	3,940	692.50	0.0	0.0	0.0	0.0	0.0
26 JUL	1652	-0.4	28.8	5,060	761.90	0.0	0.0	0.0	1.3	1.3
4 AUG	1542	0.1	27.4	6,000	744.70	0.0	0.0	0.0	0.0	0.0
8 AUG	1055	-0.7	29.8	5,520	714.30	0.0	0.0	0.0	0.0	0.0
9 AUG	1500	--	29.8	5,520	619.10	0.0	0.0	0.0	0.0	0.0
15 AUG	1650	-0.9	--	--	629.60	0.0	0.0	0.0	0.0	0.0
16 AUG	1655	-0.7	--	--	678.70	0.0	0.0	0.0	0.0	0.0
22 AUG	1535	-0.6	27.0	5,020	730.30	0.0	0.0	0.0	0.0	0.0
23 AUG	1625	-0.1	27.0	5,020	642.60	0.0	0.0	0.0	0.0	0.0
29 AUG	1122	0.0	27.7	4,880	674.70	0.0	0.0	0.0	0.0	0.0
30 AUG	1125	0.1	27.7	4,880	723.60	0.0	0.0	0.0	0.0	0.0

(a) Sample start time.

Note: Dashes indicate data not available.

TABLE 4-7 WHITE PERCH LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS ON A WEEKLY BASIS FOR PUMP COLLECTIONS AT THE LOVETT PLANT DISCHARGE, 1977

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
26 MAY	14	4.3	1.2	0	13	1	0	0	0	0	0	0	3.0	4.0	8.0
2 JUN	4	4.0	0.7	0	4	0	0	0	0	0	0	0	3.0	4.0	5.0
9 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
17 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
29 JUN	30	10.4	4.8	0	8	2	2	13	5	0	0	0	3.0	12.0	17.0
6 JUL	36	12.9	2.7	0	1	1	4	21	8	1	0	0	3.0	13.0	18.0
13 JUL	5	10.4	1.0	0	0	0	4	1	0	0	0	0	9.0	10.0	12.0
21 JUL	1	22.0	0.0	0	0	0	0	0	0	0	1	0	22.0	22.0	22.0
26 JUL	1	46.0	0.0	0	0	0	0	0	0	0	0	1	46.0	46.0	46.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
16 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
30 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

4.1.1.4 Striped Bass

Striped bass usually spawn in the Hudson River from late April to early June and peak larval abundance occurred in early June during 1977. Post-yolk-sac larvae were the most abundant life stage of striped bass collected; maximum density occurred at the Lovett plant from 9 to 28 June (Figure 4-1, Table 4-8). This period of peak abundance agrees closely with the 1975 and 1976 peaks. Striped bass juveniles reached peak abundance in entrainment collections during the last week in June. Striped bass collected during this period ranged from 6 to 58 mm in length. Post-yolk-sac larvae from 12.0 to 17.9 mm were the most abundant size group (Figure 4-2, Table 4-9). This size range composed 49.0 percent of all striped bass measured and reflected the narrow size range of a large sample collected on 29 June.

4.1.1.5 Atlantic Tomcod

Atlantic tomcod spawn in the Hudson River primarily from December to February and peak abundance of yolk-sac larvae in the river was observed in mid-March. There were no tomcod collected in the 1977 sampling effort. Entrainment sampling began after tomcod had matured past the entrainable early life stages, and no larger life stages were collected in the samples (Table 4-10).

TABLE 4-8 DENSITY OF STRIPED BASS BY SAMPLE AND LIFE STAGE IN 24-HOUR ENTRAINMENT COLLECTIONS FROM THE LOVETT PLANT DISCHARGE DURING 1977

Date	Time[a] (hr)	Tide (m)	Temperature (C)	Conductivity (μmho)	Sample Volume (m^3)	Density (No./1,000 m^3)				
						Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
26 MAY	1155	--	20.4	160	790.40	0.0	0.0	10.1	0.0	10.1
2 JUN	2000	-0.9	22.0	--	53.70	0.0	0.0	0.0	0.0	0.0
8 JUN	1530	0.0	--	--	358.70	0.0	0.0	0.0	0.0	0.0
9 JUN	1321	--	--	--	302.10	0.0	0.0	23.2	0.0	23.2
17 JUN	1200	--	21.8	6,120	364.50	0.0	2.7	16.5	0.0	19.2
28 JUN	1256	-0.4	24.1	5,780	998.10	0.0	0.0	24.0	6.0	30.0
29 JUN	1305	--	27.2	5,480	981.90	0.0	0.0	9.2	13.2	22.4
5 JUL	1142	-0.8	26.7	2,700	921.30	0.0	0.0	5.4	3.3	8.7
6 JUL	1212	-0.6	27.9	3,010	882.70	0.0	0.0	3.4	1.1	4.5
12 JUL	0950	--	23.1	5,550	907.00	0.0	0.0	2.2	0.0	2.2
13 JUL	0940	--	25.0	7,000	854.40	0.0	0.0	1.2	0.0	1.2
20 JUL	1720	-0.6	--	--	763.70	0.0	0.0	0.0	0.0	0.0
21 JUL	1740	-0.4	--	--	776.00	0.0	0.0	1.3	0.0	1.3
25 JUL	1810	--	28.8	3,940	692.50	0.0	0.0	0.0	0.0	0.0
26 JUL	1652	-0.4	28.8	5,060	761.90	0.0	0.0	0.0	1.3	1.3
4 AUG	1542	0.1	27.4	6,000	744.70	0.0	0.0	0.0	0.0	0.0
8 AUG	1055	-0.7	29.8	5,520	714.30	0.0	0.0	0.0	0.0	0.0
9 AUG	1500	--	29.8	5,520	619.10	0.0	0.0	0.0	0.0	0.0
15 AUG	1650	-0.9	--	--	629.60	0.0	0.0	0.0	0.0	0.0
16 AUG	1655	-0.7	--	--	678.70	0.0	0.0	0.0	0.0	0.0
22 AUG	1535	-0.6	27.0	5,020	730.30	0.0	0.0	0.0	0.0	0.0
23 AUG	1625	-0.1	27.0	5,020	642.60	0.0	0.0	0.0	0.0	0.0
29 AUG	1122	0.0	27.7	4,880	674.70	0.0	0.0	0.0	0.0	0.0
30 AUG	1125	0.1	27.7	4,880	723.60	0.0	0.0	0.0	0.0	0.0

(a) Sample start time.

Note: Dashes indicate data not available.

TABLE 4-9 STRIPED BASS LENGTH-FREQUENCY DISTRIBUTION AND MEAN, RANGE, AND STANDARD DEVIATION OF LENGTHS ON A WEEKLY BASIS FOR PUMP COLLECTIONS AT THE LOVETT PLANT DISCHARGE, 1977

				Length Intervals (mm)											
													Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
26 MAY	8	6.0	0.0	0	0	8	0	0	0	0	0	0	6.0	6.0	6.0
2 JUN	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 JUN	2	11.5	1.5	0	0	0	1	1	0	0	0	0	10.0	11.5	13.0
17 JUN	6	9.8	2.8	0	0	2	2	2	0	0	0	0	6.0	11.0	13.0
29 JUN	26	16.3	3.8	0	0	0	0	9	12	1	1	3	12.0	15.0	25.0
6 JUL	12	17.1	9.2	0	0	0	5	2	1	0	1	3	9.0	12.0	39.0
13 JUL	3	12.7	0.9	0	0	0	0	3	0	0	0	0	12.0	12.0	14.0
21 JUL	1	11.0	0.0	0	0	0	1	0	0	0	0	0	11.0	11.0	11.0
26 JUL	1	58.0	0.0	0	0	0	0	0	0	0	0	1	58.0	58.0	58.0
4 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
16 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
23 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
30 AUG	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-10 DENSITY OF ATLANTIC TOMCOD BY SAMPLE AND LIFE STAGE IN 24-HOUR ENTRAINMENT COLLECTIONS FROM THE LOVETT PLANT DISCHARGE DURING 1977

Date	Time[a] (hr)	Tide (m)	Temperature (C)	Conductivity (μmho)	Sample Volume (m^3)	Density (No./1,000 m^3)				
						Eggs	Yolk-Sac Larvae	Larvae	Juveniles	Total (Excluding Eggs)
26 MAY	1155	--	20.4	160	790.40	0.0	0.0	0.0	0.0	0.0
2 JUN	2000	-0.9	22.0	--	53.70	0.0	0.0	0.0	0.0	0.0
8 JUN	1530	0.0	--	--	358.70	0.0	0.0	0.0	0.0	0.0
9 JUN	1321	--	--	--	302.10	0.0	0.0	0.0	0.0	0.0
17 JUN	1200	--	21.8	6,120	364.50	0.0	0.0	0.0	0.0	0.0
28 JUN	1256	-0.4	24.1	5,780	998.10	0.0	0.0	0.0	0.0	0.0
29 JUN	1305	--	27.2	5,480	981.90	0.0	0.0	0.0	0.0	0.0
5 JUL	1142	-0.8	26.7	2,700	921.30	0.0	0.0	0.0	0.0	0.0
6 JUL	1212	-0.6	27.9	3,010	882.70	0.0	0.0	0.0	0.0	0.0
12 JUL	0950	--	23.1	5,550	907.00	0.0	0.0	0.0	0.0	0.0
13 JUL	0940	--	25.0	7,000	854.40	0.0	0.0	0.0	0.0	0.0
20 JUL	1720	-0.6	--	--	763.70	0.0	0.0	0.0	0.0	0.0
21 JUL	1740	-0.4	--	--	776.00	0.0	0.0	0.0	0.0	0.0
25 JUL	1810	--	28.8	3,940	692.50	0.0	0.0	0.0	0.0	0.0
26 JUL	1652	-0.4	28.8	5,060	761.90	0.0	0.0	0.0	0.0	0.0
4 AUG	1542	0.1	27.4	6,000	744.70	0.0	0.0	0.0	0.0	0.0
8 AUG	1055	-0.7	29.8	5,520	714.30	0.0	0.0	0.0	0.0	0.0
9 AUG	1500	--	29.8	5,520	619.10	0.0	0.0	0.0	0.0	0.0
15 AUG	1650	-0.9	--	--	629.60	0.0	0.0	0.0	0.0	0.0
16 AUG	1655	-0.7	--	--	678.70	0.0	0.0	0.0	0.0	0.0
22 AUG	1535	-0.6	27.0	5,020	730.30	0.0	0.0	0.0	0.0	0.0
23 AUG	1625	-0.1	27.0	5,020	642.60	0.0	0.0	0.0	0.0	0.0
29 AUG	1122	0.0	27.7	4,880	674.70	0.0	0.0	0.0	0.0	0.0
30 AUG	1125	0.1	27.7	4,880	723.60	0.0	0.0	0.0	0.0	0.0

(a) Sample start time.

Note: Dashes indicate data not available.

REFERENCES

Bath, D. 1974. New York University egg and larval seminar. Unpublished.

Bayless, J. D. 1972. Artificial propagation and hybridization of striped bass, Morone saxatilis (Walbaum). South Carolina Wildlife Resources Dept.

Bigelow, H. B. and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. U.S. Fish and Wildlife Serv. Fish. Bull. 74.

Booth, R. A. 1967. A description of the larval stages of the tomcod, Microgadus tomcod, with comments on its spawning ecology. Ph.D. Thesis, Univ. Connecticut.

Chambers, J. R., J. A. Musick and J. Davis. 1976. Methods of distinguishing larval alewife from larval blueback herring. Chesapeaks Sci. 17:93-100.

Cianci, J. M. 1969. Larval development of the alewife, Alosa pseudoharengus Wilson and the glut herring Alosa aestivalis Mitchell. M.S. Thesis, Univ. Conn.

Doroshev, S. I. 1970. Biological features of the eggs, larvae, and young of the striped bass (Roccus saxatilis Walbaum) in connection with the problem of its acclimatization in the USSR. J. Ichthiology 10:236-247.

Dovel, W. L. and J. R. Edmunds. 1971. Recent changes in striped bass spawning sites and commercial fishing areas in Upper Chesapeake Bay; Possible influencing factors. Chesapeake Sci. 12:33-39.

Ecological Analysts, Inc. 1976. Lovett Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretive Report.

Ecological Analysts, Inc. 1977. Lovett Generating Station Entrainment and Impingement Studies. 1976 Annual Interpretive Report.

Ecological Analysts, Inc. 1978. Bowline Point Generating Station Entrainment Abundance Studies. 1977 Annual Report.

Hildebrand, R. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. Bull. U.S. Bur. Fish. 43.

Krester, W. A. 1968. Aspects of striped bass larvae Morone saxatilis captured in the Hudson River near Cornwall, N.Y. April-August 1968. Consolidated Edison Company of New York, Inc.

Leim, A. H. 1924. The life history of the shad (Alosa sapidissima) with special reference to the factors limiting its abundance. Contrib. Canadian Biol. 2(11):161-284.

Lippson, A. J. and R. L. Moran. 1974. Manual for identification of early developmental stages of fishes of the Potomac River Estuary. Env. Tech. Center, Martin Marietta Corp.

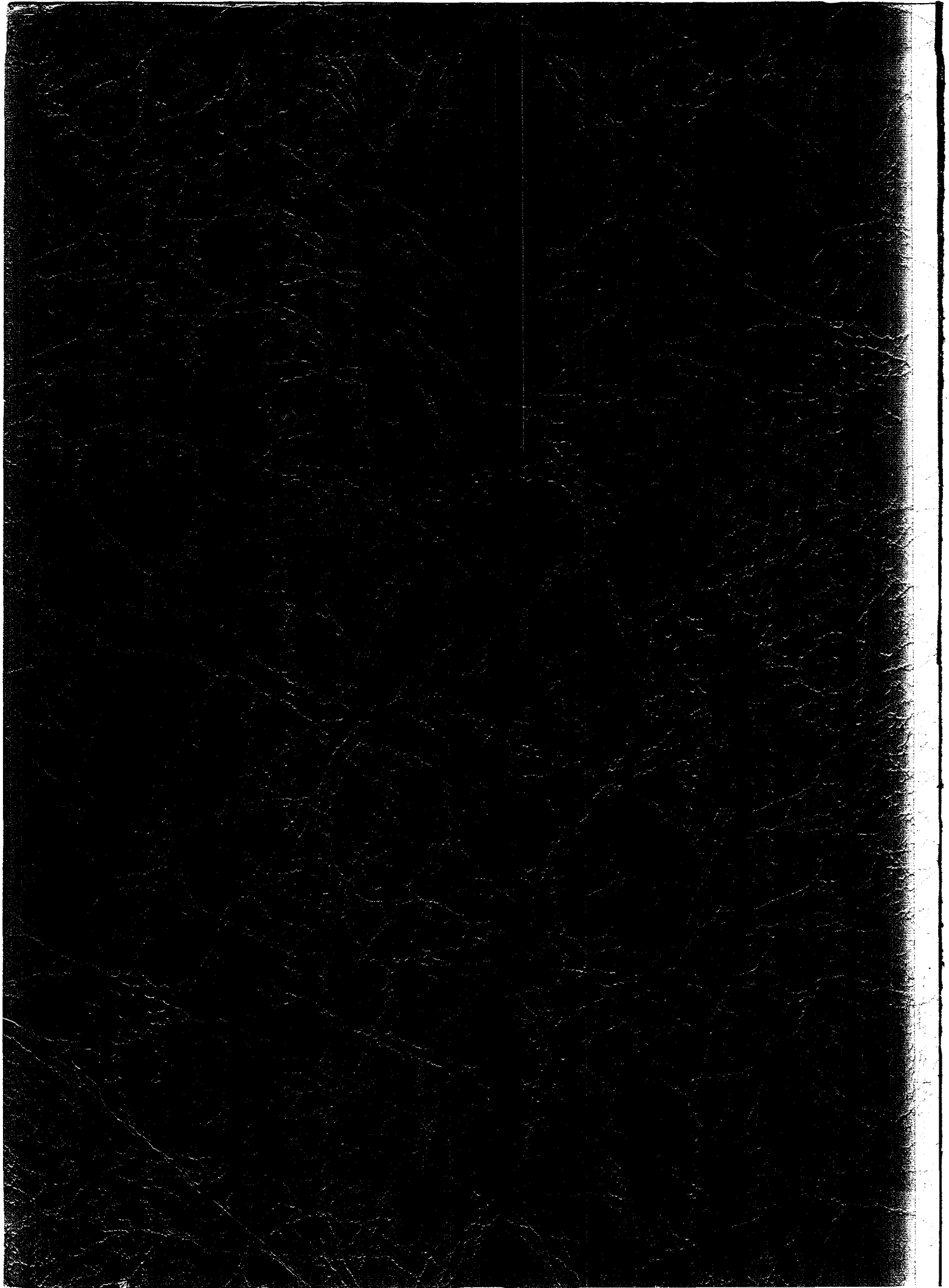
Mansueti, A. J. and J. D. Hardy, Jr. 1967. Development of fishes of the Chesapeake Bay region; an atlas of egg, larval, and juvenile stages. Natural Res. Inst., Univ. of Maryland. 202 pp.

Orange and Rockland Utilities, Inc. 1978. Bowline Point Generating Station 316(a) Demonstration.

Rathjen, W. F., and L. C. Miller. 1957. Aspects of the early life history of the striped bass (Roccus saxatilis) in the Hudson River. N.Y. Fish and Game J. 4:43-60.

Scotton, L. N., R. E. Smith, N. S. Smith, K. S. Price, and D. P. de Sylva. 1973. Pictorial guide to fish larvae of Delaware Bay with information and bibliographies useful for the study of fish larvae. College Marine Studies, Univ. Delaware, Delaware Bay Rpt. Ser. 7, 206 pp.

Wang, J. C. S. and R. J. Kernehan. (In press). Fishes of the Delaware estuaries: A guide to the early life histories. EA Communications. 350 pp.



HR Library # 150790

1978-02

Orange and Rockland Utilities, Inc.

1977 HUDSON RIVER AQUATIC ECOLOGY STUDIES at the LOVETT GENERATING STATION

SEPTEMBER 1978

One Blue Hill Plaza
Pearl River, New York 10965

Lawler Matusky & Skelly Engineers
Environmental Science & Engineering Consultants

ORANGE AND ROCKLAND UTILITIES, INC.

one blue hill plaza, pearl river, new york, 10965 914-352-6000

writer's direct dial number

(914) 627-2581

October 4, 1978

Mr. Thomas G. Huggins
Central Hudson Gas & Electric Corporation
284 South Avenue
Poughkeepsie, NY 12602

Dear Tom,

Enclosed for your information is one (1) copy of each of the following reports:

1) 1977 Hudson River Aquatic Ecology Studies at the Bowline Point Generating Station.

2) 1977 Hudson River Aquatic Ecology Studies at the Lovett Generating Station.

If you have any questions, please contact me.

Very truly yours,

Jay B. Hutchison, Jr.
Aquatic Biologist

JBHjr:los

Enc.

ORANGE AND ROCKLAND UTILITIES, INC.

1977 IMPINGEMENT STUDIES AT THE LOVETT GENERATING STATION

SEPTEMBER 1978

LMSE-78/0131&169/152

LAWLER, MATUSKY & SKELLY ENGINEERS
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

TABLE OF CONTENTS

		Page
	LIST OF FIGURES	ii
	LIST OF TABLES	iii
I.	ABSTRACT	I-1
II.	INTRODUCTION	
A.	Events Leading to the Report	II-1
B.	Objectives	II-2
III.	SUMMARY OF REPORT CONCLUSIONS	
IV.	IMPINGEMENT	
A.	Introduction	IV-1
B.	Materials and Methods	IV-1
	1. Impingement Sampling Program	IV-1
	2. Sampling Procedures	IV-1
	3. Laboratory Analysis	IV-2
C.	Results and Discussion	IV-2
	1. Abundance and Biomass	IV-2
	2. Seasonal Cycle	IV-3
	3. Length Frequency	IV-4
	4. Estimated Total Annual Impingement	IV-4
	BIBLIOGRAPHY	

LIST OF FIGURES

Figure No.	Title	Following Page
II-1	Location of the Lovett Plant and Other Generating Stations on the Lower Hudson River Estuary	II-1
II-2	Plan of Lovett Generating Station	II-1

LIST OF TABLES

Table No.	Title	Following Page
II-1	Plant Operational Data	II-1
IV-1	Impingement Sampling Program	IV-1
IV-2	Species Inventory of Fish in Impingement Collections	IV-3
IV-3	Abundance and Percent Composition of Impingement Collections	IV-3
IV-4	Biomass and Percent Composition of Impingement Collections	IV-3
IV-5	Weekly Estimated Impingement Rate for All Fish Species	IV-3
IV-6	Weekly Estimated Impingement Rate for Alewife	IV-3
IV-7	Weekly Estimated Impingement Rate for American Shad	IV-3
IV-8	Weekly Estimated Impingement Rate for Atlantic Tomcod	IV-3
IV-9	Weekly Estimated Impingement Rate for Bay Anchovy	IV-3
IV-10	Weekly Estimated Impingement Rate for Blueback Herring	IV-3
IV-11	Weekly Estimated Impingement Rate for Gizzard Shad	IV-3
IV-12	Weekly Estimated Impingement Rate for Striped Bass	IV-3
IV-13	Weekly Estimated Impingement Rate for White Perch	IV-3
IV-14	Length-Frequency of Alewife	IV-4

LIST OF TABLES
(Continued)

Table No.	Title	Following Page
IV-15	Length-Frequency of Atlantic Tomcod	IV-4
IV-16	Length-Frequency of Bay Anchovy	IV-4
IV-17	Length-Frequency of Blueback Herring	IV-4
IV-18	Length-Frequency of Striped Bass	IV-4
IV-19	Length-Frequency of White Perch	IV-4

I. ABSTRACT

Data are presented and summarized to document a study of the impinged fish assemblage at the Lovett Generating Station, located at kilometer point 67 on the Lower Hudson River.

A total of 35 fish species were identified from the 63 impingement collections. The dominant species impinged throughout 1977 was white perch, followed by Atlantic tomcod and gizzard shad. An estimate of the total number impinged based on individual monthly rates (number of fish per million cubic meters) and total plant flow (million cubic meters) provided a total estimated impingement of 114,860 fish, composed primarily of white perch (71%), gizzard shad (6%) and Atlantic tomcod (5%).

II. INTRODUCTION

A. EVENTS LEADING TO THE REPORT

The impingement studies described in this report were conducted at the Lovett Generating Station, a fossil-fueled steam electric power plant. The station is situated on the west bank of the Hudson River estuary, approximately 7.5 km (4.5 miles) north of the Bowline Point Generating Station (Figure II-1).

Lawler, Matusky & Skelly Engineers (LMS) has been engaged as environmental engineering consultants by Orange and Rockland Utilities (O&R) since 1968. Prior to 1 November 1974, LMS operated under the name of Quirk, Lawler & Matusky Engineers (QLM). The environmental studies which LMS has performed on behalf of O&R have concerned the general ecology, water chemistry, and hydrology of the area of the Hudson River under the influence of the Bowline Point and Lovett Generating Stations.

The Lovett Generating Station consists of five units. Unit 1 became operational in February 1949, Unit 2 in July 1951, Unit 3 in March 1955, Unit 4 in May 1966, and Unit 5 in April 1969. The generating capacity of the individual units ranges from a low of 19 megawatts (MWe) for Unit 1 to a high of 202 MWe for Unit 5. The station has a total generating capacity of 501 MWe and a maximum condenser cooling water flow of 20.3 m^3/sec. Design characteristics for each unit are summarized in Table II-1.

Locations of the condenser cooling water intake and discharge structures for the five units are illustrated in Figure II-2. Each intake structure incorporates standard bar racks with 1-cm mesh vertical traveling screens for the removal of debris at the intake.

FIGURE II - 1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES
LOCATION OF THE LOVETT PLANT AND OTHER
GENERERATING STATIONS ON THE LOWER HUDSON RIVER ESTUARY

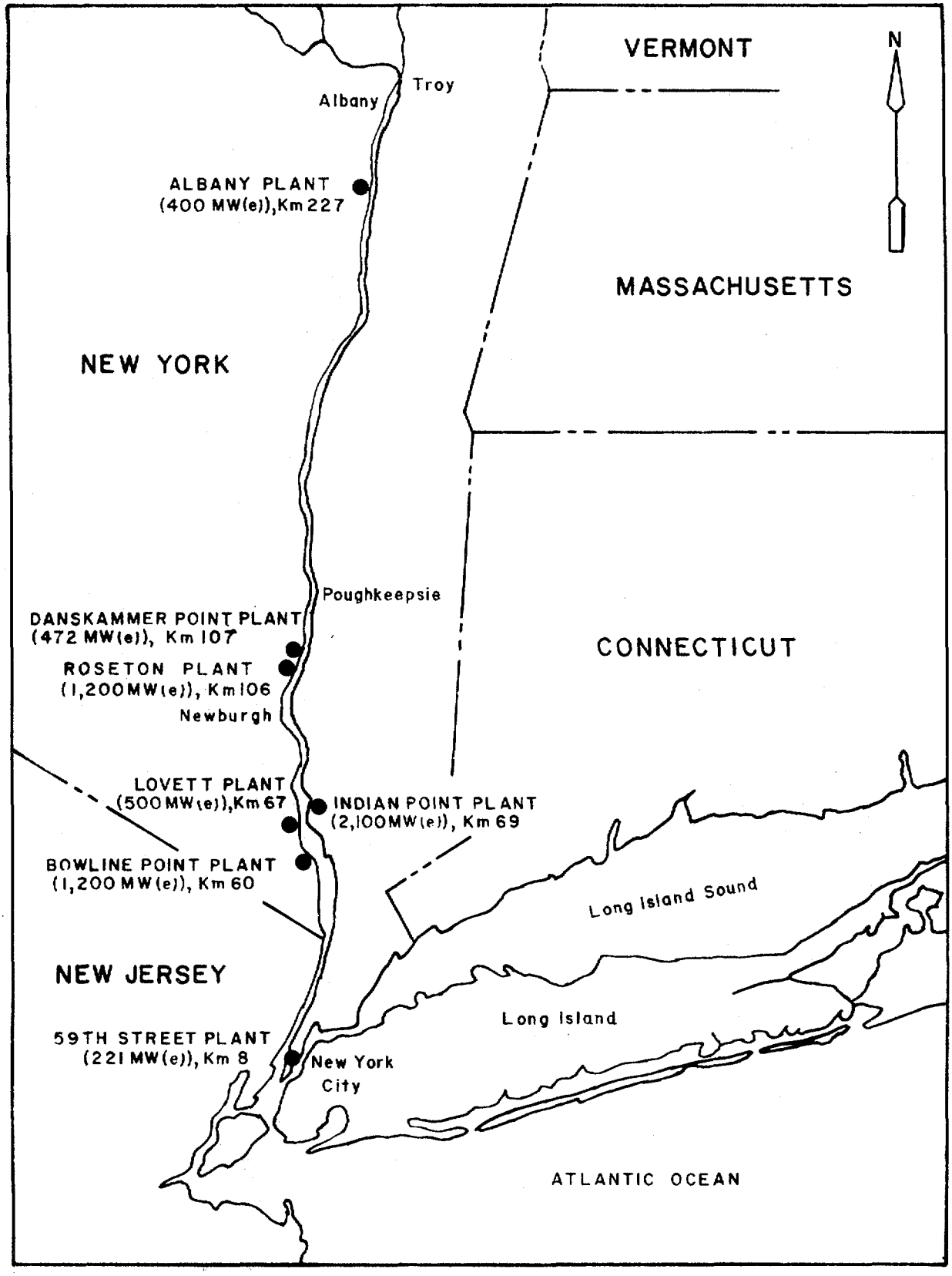


TABLE II-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

PLANT OPERATIONAL DATA

LOVETT GENERATING STATION - 1977

OPERATING CHARACTERISTICS	1	2	3	4	5	TOTAL PLANT
Maximum Net Generating Capacity (MWe)	19	20	63	197[a]	202	501
Cooling Water Flow Rate (m^3/min)						
Condenser (rounded off)	95.4	95.4	159.7	394.8	454.2	1195.7
Service Water	3.8	3.8	3.8	7.6	7.6	26.5
Total Heat Rejection Rate (Btu/hr)	2.02×10^8	1.89×10^8	3.38×10^8	1.15×10^9	1.08×10^9	2.96×10^9
Condenser Water Temperature Rise (F)[b]	16	15	16	22	18	NA
INTAKE CHARACTERISTICS						
Type of Intake, all units			shoreline			
Maximum Velocity at Screens (cm/sec)	46.1	46.1	55.5	49.7	60.6	-
Total Flow Rate [m^3/min]	99.2	99.2	163.5	402.3	461.8	1222.2

OUTFALL CHARACTERISTICS	1, 2, 3	4	5	TOTAL PLANT
Pipe Velocity (cm/sec)	30.3	90.9	81.8	NA
Inside Diameter of Outfall (or outfall area**) (m)	19.8 sq m**	3.0	9.4 sq m**	NA
Initial Jet Velocity (cm/sec)	30.3	106.1	81.8	NA
Total Diffuser Flow (m^3/min)	361.8	402.3	461.8	1226.0
Average Depth of Port Centerline Below Mean Low Water (m)	surface	2.1	2.1	NA
Average Depth to River Bottom Below Mean Low Water (m)	NA	NA	2.9	NA

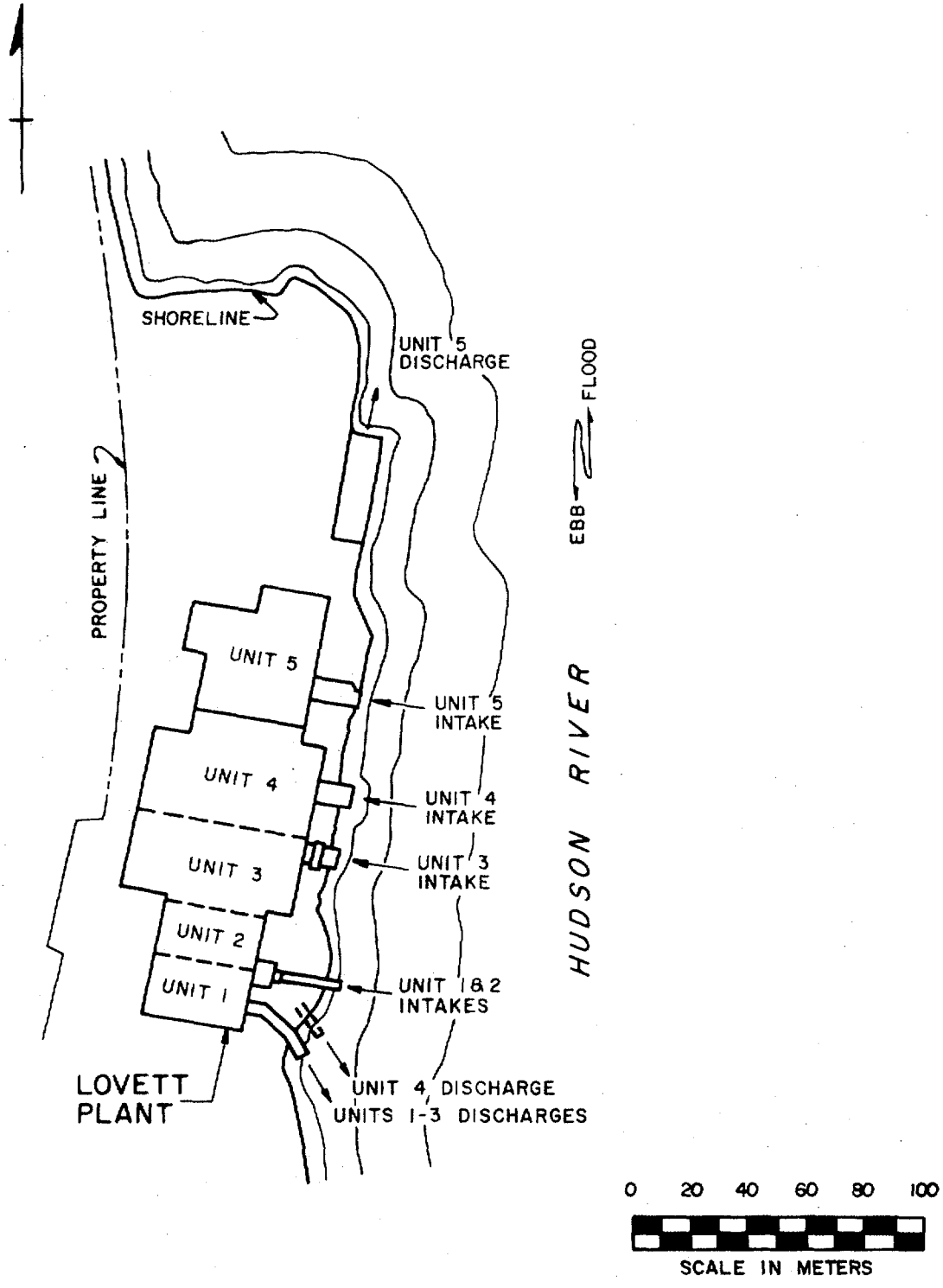
NA - Not applicable

[a] Presently derated to 187 MWe (10 JUL 1975)
[b] Frequency of occurrence of these temperature rises is less than 5% of the time

ORANGE AND ROCKLAND UTILITIES, INC.

1977 AQUATIC ECOLOGY STUDIES

PLAN OF LOVETT GENERATING STATION



Cooling water for Units 1, 2, 3, and 5 is discharged from surface ports at the river shoreline while Unit 4 discharges at the bottom, approximately 75 m offshore. Each generating unit has two circulating water pumps which can be operated individually or in combination. In normal operation, both circulating pumps are on-line.

Units 1 and 2 are maintained as standby units, being operated only during periods of critical power demand.

B. OBJECTIVES

The 1977 studies continue the programs carried out from 1973 through 1976. The program was designed to estimate monthly impingement rates, to define the species composition, and to determine seasonal cycles of impingement for selected species.

III. SUMMARY OF REPORT CONCLUSIONS

In all, 35 fish species were identified at the Lovett Generating Station; these represented a total of 12,283 individuals weighing 209.6 kg (461 lbs). White perch was the dominant species collected, constituting 66% of the total impingement.

The impingement rate was higher during the colder months (peaking in January) and lower during the warmer months (lowest in September). Impingement of certain species (gizzard shad and spottail shiner) demonstrated strict seasonality while others (white perch, striped bass) were present throughout the year.

Length frequency analyses of alewife, Atlantic tomcod, bay anchovy, blueback herring, striped bass, and white perch indicated that a preponderance of individuals of these species impinged were immature, within their first year of life.

An estimated total of 114,860 fish were impinged at Lovett throughout 1977. Of these, white perch accounted for 80,980 fish or 71% of the total estimate.

IV. IMPINGEMENT

A. INTRODUCTION

This chapter summarizes the impingement studies performed at the Lovett Generating Station during 1977. These studies consisted of weekly sampling of operating units from January through December. Dates of impingement sampling at the Lovett plant are listed in Table IV-1.

The intake structures and flow regimes for the Lovett Generating Station have already been described in Chapter II.

B. MATERIALS AND METHODS

1. Impingement Sampling Program

Surveys consisted of one 24-hour sample unless more frequent collections were necessitated by debris buildup. Impingement samples at the Lovett station were taken from the impingement baskets for Units 3, 4, and 5.

2. Sampling Procedures

Fishes and invertebrates were collected from the screenwash discharge pipe for each operating unit in angle iron baskets of 0.95 square cm steel mesh. Water quality parameters were measured at the intake of Lovett Unit 5 with each collection. Temperature, dissolved oxygen, conductivity, turbidity, and pH were measured by meter at surface and bottom depths. If meters were not available, wet samples were collected and analyzed in the laboratory.

TABLE IV-1

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

IMPINGEMENT SAMPLING PROGRAM

LOVETT GENERATING STATION - 1977

DATE	UNIT 3	4	5
5- 6 JAN		X	X
12-13			X
26-27		X	
2- 3 FEB		X	X
9-10	X	X	
23-24		X	
2- 3 MAR		X	
9-10		X	
16-17		X	
23-24		X	
6- 7 APR		X	
13-14		X	
20-21		X	
27-28		X	
4- 5 MAY		X	
11-12		X	
18-19		X	
25-26		X	X
1- 2 JUN		X	X
8- 9		X	
15-16			X
22-23	X		X
29-30		X	X
6- 7 JUL		X	X
13-14		X	X
20-21		X	X
27-28		X	X
3- 4 AUG			X
10-11			X
24-25			X
31- 1 SEP	X		X
7- 8 SEP		X	
14-15		X	
21-22		X	
28-29		X	
5- 6 OCT			X
12-13			X
19-20			X
26-27			X
2- 3 NOV		X	
9-10			X
16-17			X
23-24		X	
30- 1 DEC		X	X
7- 8 DEC		X	X
14-15		X	
15-16		X	
21-22		X	
28-29			X

Relevant plant operating data (i.e., the number of circulating water pumps and traveling screens operating, backwash pressure, and tidal height) were recorded during each impingement collection.

3. Laboratory Analysis

In the laboratory analysis of impingement samples, collections from alternate weeks received either full analysis (preliminary and secondary) or partial analysis (preliminary only). Preliminary analysis was performed on each sample and involved: 1) identifying, counting, and determining total species biomass, and 2) checking all white perch, striped bass, and Atlantic tomcod for T.I. tags (commercial tags and fin clips).

Secondary analyses were performed on a composite of all samples and involved determining the wet weight and total length of up to 100 individuals each of six selected species (i.e., white perch, striped bass, Atlantic tomcod, bay anchovy, alewife, and blueback herring).

Wet weight was determined to the nearest tenth of a gram on a calibrated Mettler balance, and total length was measured to the nearest millimeter. Total length was defined as the distance from the tip of the snout (jaws closed) to the tip of the tail with the lobes compressed to give the maximum possible measurement (Hile 1948).

C. RESULTS AND DISCUSSION

1. Abundance and Biomass

During the 1977 impingement sampling program, distribution of collected fish among the 35 species identified was fairly even throughout the year. American eel, pumpkinseed, white catfish, and

white perch were collected each month, whereas carp, crevalle jack, warmouth, weakfish, Atlantic menhaden, redbreast sunfish, and white crappie appeared only occasionally (Table IV-2).

A total of 12,283 fish, weighing 209.6 kg (461 lbs), were collected from the intake screens of Lovett Units 3, 4, and 5 during 1977 (Tables IV-3 and IV-4). White perch represented 66.1% of the total annual collection and 45.6% of the total annual biomass (Tables IV-3 and IV-4). Only two other species, Atlantic tomcod (6.7%) and gizzard shad (6.3%), accounted for at least 5% of the total yearly impingement.

2. Seasonal Cycle

The impingement rate (number per million cubic meters) was highest in January (1484.94) and lowest in September (31.33) (Tables IV-5 through IV-13). Impingement rates were generally higher during the colder months, from October through February. A high impingement rate in June can be attributed to the presence of yearling white perch (Table IV-13) and young-of-the-year Atlantic tomcod (IV-8).

Impingement of selected species demonstrated strict seasonality. Gizzard shad were collected predominantly in December and January; while spottail shiners were impinged during the spring. Although present throughout the year, white perch were impinged in greatest numbers during late fall and winter. Young-of-the-year Atlantic tomcod dominated the collections throughout June and July.

TABLE IV-2

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

SPECIES INVENTORY OF FISH IN IMPINGEMENT COLLECTIONS

LOVETT GENERATING STATION - 1977

COMMON NAME	SCIENTIFIC NAME	MONTHS OF OCCURRENCE											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
-	Alosa sp.	X											
Alewife	Alosa pseudoharengus	X				X	X	X	X	X	X	X	
American eel	Anguilla rostrata	X	X	X	X	X	X	X	X	X	X	X	X
American shad	Alosa sapidissima							X	X	X	X	X	X
Atlantic menhaden	Brevoortia tyrannus						X	X					
Atlantic tomcod	Microgadus tomcod	X	X	X			X	X	X	X			X
Banded killifish	Fundulus diaphanus	X	X	X	X	X	X		X			X	X
Bay anchovy	Anchoa mitchilli						X	X	X	X			
Black crappie	Poxomis nigromaculatus				X		X					X	X
Blueback herring	Alosa aestivalis						X	X	X	X	X	X	
Bluefish	Pomatomus saltatrix						X	X	X	X			
Bluegill	Lepomis macrochirus		X	X	X	X	X	X	X		X	X	X
Brown bullhead	Ictalurus nebulosus	X	X	X			X		X		X	X	
Carp	Cyprinus carpio											X	
Crevalle jack	Caranx hippos										X		
Gizzard shad	Dorosoma cepedianum	X	X	X	X						X	X	X
Golden shiner	Notemigonus crysoleucas	X	X	X				X					X
Goldfish	Carassius auratus	X	X	X						X		X	X
Hogchoker	Trinectes maculatus			X	X	X	X	X	X	X	X	X	
Largemouth bass	Micropterus salmoides	X								X	X	X	X
Pumpkinseed	Lepomis gibbosus	X	X	X	X	X	X	X	X	X	X	X	X
Rainbow smelt	Osmerus mordax		X	X	X	X	X		X		X	X	X
Redbreast sunfish	Lepomis auritus					X		X					
Rough silverside	Membras martinica						X	X	X	X			
Spot	Leiostomas xanthurus								X	X	X	X	
Spottail shiner	Notropis hudsonius	X	X	X	X	X	X		X			X	X
Striped bass	Morone saxatilis	X	X	X	X		X	X	X	X	X	X	X
Tessellated darter	Etheostoma olmstedi			X	X	X	X						
Warmouth	Lepomis gulosus											X	
Weakfish	Cynoscion regalis								X				
White bass	Morone chrysops	X									X	X	X
White catfish	Ictalurus catus	X	X	X	X	X	X	X	X	X	X	X	X
White crappie	Poxomis annularis			X		X							
White perch	Morone americana	X	X	X	X	X	X	X	X	X	X	X	X
Yellow perch	Perca flavescens	X		X	X	X	X	X					X

TABLE IV-3

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	1	*	0	0.0	0	0.0	0	0.0
ALOSA SP	1	*	0	0.0	0	0.0	0	0.0
AMERICAN EEL	4	0.1	7	0.4	5	1.0	4	0.8
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	29	0.9	12	0.7	13	2.7	0	0.0
BANDED KILLIFISH	13	0.4	2	0.1	8	1.7	2	0.4
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	1	0.2
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	0	0.0
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	0	0.0	1	0.1	4	0.8	3	0.6
BROWN BULLHEAD	2	0.1	3	0.2	1	0.2	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
GIZZARD SHAD	207	6.3	49	2.9	1	0.2	1	0.2
GOLDEN SHINER	2	0.1	5	0.3	5	1.0	0	0.0
GOLDFISH	19	0.6	8	0.5	6	1.2	0	0.0
HOGCHOKER	0	0.0	0	0.0	1	0.2	11	2.1
LARGEMOUTH BASS	3	0.1	0	0.0	0	0.0	0	0.0
PUMPKINSEED	95	2.9	18	1.1	27	5.6	32	6.1
RAINBOW SMELT	0	0.0	6	0.4	22	4.6	50	9.6
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
SPOT	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	55	1.7	22	1.3	88	18.3	35	6.7
STRIPED BASS	62	1.9	69	4.1	26	5.4	1	0.2
TESSELLATED DARTER	0	0.0	0	0.0	1	0.2	1	0.2
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE BASS	1	*	0	0.0	0	0.0	0	0.0
WHITE CATFISH	36	1.1	22	1.3	17	3.5	15	2.9
WHITE CRAPPIE	0	0.0	0	0.0	1	0.2	0	0.0
WHITE PERCH	2734	83.4	1441	86.5	243	50.4	362	69.5
YELLOW PERCH	13	0.4	0	0.0	13	2.7	3	0.6
TOTAL	3277	100.0	1665	99.9	482	99.9	521	100.1
MONTHLY FLOW SAMPLED (MCM)	32.3732		18.1283		16.1417		17.1126	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE IV-3 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	5	3.6	11	0.7	69	13.0	27	8.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	2	1.4	16	1.0	3	0.6	3	1.0
AMERICAN SHAD	0	0.0	0	0.0	11	2.1	1	0.3
ATLANTIC MENHADEN	0	0.0	7	0.4	1	0.2	0	0.0
ATLANTIC TOMCOD	0	0.0	568	34.0	159	29.9	41	13.5
BANDED KILLIFISH	1	0.7	1	0.1	0	0.0	1	0.3
BAY ANCHOVY	0	0.0	17	1.0	96	18.0	25	8.2
BLACK CRAPPIE	0	0.0	1	0.1	0	0.0	0	0.0
BLUEBACK HERRING	0	0.0	40	2.4	10	1.9	1	0.3
BLUEFISH	0	0.0	75	4.5	83	15.6	23	7.6
BLUEGILL	3	2.2	3	0.2	1	0.2	1	0.3
BROWN BULLHEAD	0	0.0	1	0.1	0	0.0	1	0.3
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	0	0.0	0	0.0	1	0.2	0	0.0
GOLDFISH	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	30	21.6	12	0.7	1	0.2	1	0.3
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	11	7.9	90	5.4	6	1.1	2	0.7
RAINBOW SMELT	8	5.8	62	3.7	0	0.0	1	0.3
REDBREAST SUNFISH	2	1.4	0	0.0	1	0.2	0	0.0
ROUGH SILVERSIDE	0	0.0	1	0.1	10	1.9	11	3.6
SPOT	0	0.0	0	0.0	0	0.0	24	7.9
SPOTTAIL SHINER	3	2.2	12	0.7	0	0.0	3	1.0
STRIPED BASS	0	0.0	6	0.4	5	0.9	12	3.9
TESSELLATED DARTER	3	2.2	2	0.1	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	1	0.3
WHITE BASS	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	4	2.9	10	0.6	2	0.4	2	0.7
WHITE CRAPPIE	1	0.7	0	0.0	0	0.0	0	0.0
WHITE PERCH	65	46.8	731	43.8	72	13.5	123	40.5
YELLOW PERCH	1	0.7	3	0.2	1	0.2	0	0.0
TOTAL	139	100.1	1669	100.2	532	100.1	304	99.9
MONTHLY FLOW SAMPLED (MCM)	17.4201		22.5983		30.0132		37.6079	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE IV-3 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

ABUNDANCE AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
ALEWIFE	2	2.7	54	6.3	63	3.0	0	0.0	232	1.9
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	1	*
AMERICAN EEL	1	1.4	2	0.2	5	0.2	12	1.8	64	0.5
AMERICAN SHAD	1	1.4	3	0.4	1	*	1	0.1	18	0.1
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0	8	0.1
ATLANTIC TOMCOD	2	2.7	0	0.0	0	0.0	1	0.1	825	6.7
BANDED KILLIFISH	0	0.0	0	0.0	1	*	3	0.4	32	0.3
BAY ANCHOVY	9	12.3	0	0.0	0	0.0	0	0.0	147	1.2
BLACK CRAPPIE	0	0.0	0	0.0	2	0.1	1	0.1	5	*
BLUEBACK HERRING	24	32.9	14	1.6	8	0.4	0	0.0	97	0.8
BLUEFISH	1	1.4	0	0.0	0	0.0	0	0.0	182	1.5
BLUEGILL	0	0.0	16	1.9	54	2.6	22	3.2	108	0.9
BROWN BULLHEAD	0	0.0	1	0.1	1	*	0	0.0	10	0.1
CARP	0	0.0	0	0.0	1	*	0	0.0	1	*
CREVALLE JACK	0	0.0	1	0.1	0	0.0	0	0.0	1	*
GIZZARD SHAD	0	0.0	10	1.2	110	5.3	399	58.8	777	6.3
GOLDEN SHINER	0	0.0	0	0.0	0	0.0	10	1.5	23	0.2
GOLDFISH	1	1.4	0	0.0	1	*	5	0.7	40	0.3
HOGCHOKER	2	2.7	8	0.9	57	2.7	0	0.0	123	1.0
LARGEMOUTH BASS	1	1.4	5	0.6	4	0.2	5	0.7	18	0.1
PUMPKINSEED	3	4.1	14	1.6	9	0.4	18	2.7	325	2.6
RAINBOW SMELT	0	0.0	3	0.4	4	0.2	2	0.3	158	1.3
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0	3	*
ROUGH SILVERSIDE	10	13.7	0	0.0	0	0.0	0	0.0	32	0.3
SPOT	1	1.4	44	5.1	2	0.1	0	0.0	71	0.6
SPOTTAIL SHINER	0	0.0	0	0.0	5	0.2	7	1.0	230	1.9
STRIPED BASS	2	2.7	32	3.7	46	2.2	8	1.2	269	2.2
TESSELLATED DARTER	0	0.0	0	0.0	0	0.0	0	0.0	7	0.1
WARMOUTH	0	0.0	0	0.0	1	*	0	0.0	1	*
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0	1	*
WHITE BASS	0	0.0	18	2.1	9	0.4	10	1.5	38	0.3
WHITE CATFISH	2	2.7	10	1.2	128	6.1	30	4.4	278	2.3
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	2	*
WHITE PERCH	11	15.1	620	72.5	1576	75.5	137	20.2	8115	66.1
YELLOW PERCH	0	0.0	0	0.0	0	0.0	7	1.0	41	0.3
TOTAL	73	100.0	855	99.9	2088	99.6	678	99.7	12283	100.0
MONTHLY FLOW SAMPLED (MCM)	25.3548		24.2195		19.9137		15.6386		276.5219	

* LESS THAN 0.1 PERCENT

(MCM) Million cubic meters, all units combined

TABLE IV-4

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	JAN		FEB		MAR		APR	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	0	0.0	0	0.0	0	0.0	0	0.0
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	895	1.4	1676	4.6	650	5.0	654	6.1
AMERICAN SHAD	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0
ATLANTIC TOMCOD	503	0.8	270	0.7	216	1.6	0	0.0
BANDED KILLIFISH	58	0.1	16	*	46	0.3	11	0.1
BAY ANCHOVY	0	0.0	0	0.0	0	0.0	0	0.0
BLACK CRAPPIE	0	0.0	0	0.0	0	0.0	53	0.5
BLUEBACK HERRING	0	0.0	0	0.0	0	0.0	0	0.0
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0
BLUEGILL	0	0.0	5	*	283	2.2	6	0.1
BROWN BULLHEAD	460	0.7	538	1.5	7	0.1	0	0.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
GIZZARD SHAD	28021	43.4	7800	21.6	71	0.5	0	0.0
GOLDEN SHINER	0	0.0	179	0.5	215	1.6	0	0.0
GOLDFISH	5066	7.8	3701	10.3	2153	16.4	0	0.0
HOGCHOKER	0	0.0	0	0.0	11	0.1	275	2.6
LARGEMOUTH BASS	1212	1.9	0	0.0	0	0.0	0	0.0
PUMPKINSEED	3342	5.2	751	2.1	809	6.2	1348	12.7
RAINBOW SMELT	0	0.0	28	0.1	486	3.7	131	1.2
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0
ROUGH SILVERSIDE	0	0.0	0	0.0	0	0.0	0	0.0
SPOT	0	0.0	0	0.0	0	0.0	0	0.0
SPOTTAIL SHINER	267	0.4	199	0.6	729	5.6	170	1.6
STRIPED BASS	756	1.2	4857	13.5	153	1.2	4	*
TESSELLATED DARTER	0	0.0	0	0.0	5	*	3	*
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE BASS	11	*	0	0.0	0	0.0	0	0.0
WHITE CATFISH	1708	2.6	2681	7.4	1705	13.0	163	1.5
WHITE CRAPPIE	0	0.0	0	0.0	9	0.1	0	0.0
WHITE PERCH	21858	33.8	13374	37.1	4776	36.4	7574	71.1
YELLOW PERCH	478	0.7	0	0.0	798	6.1	257	2.4
TOTAL (KG.)	64.6	100.0	36.1	100.0	13.1	100.1	10.6	99.9
MONTHLY FLOW SAMPLED (MCM)	32.3732		18.1283		16.1417		17.1126	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS

(MCM) Million cubic meters, all units combined

TABLE IV-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	MAY		JUN		JUL		AUG	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT
ALEWIFE	866	17.4	849	3.0	249	3.1	33	0.4
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0
AMERICAN EEL	109	2.2	1290	4.6	163	2.0	104	1.3
AMERICAN SHAD	0	0.0	0	0.0	6	0.1	3	*
ATLANTIC MENHADEN	0	0.0	1136	4.1	8	0.1	0	0.0
ATLANTIC TOMCOD	0	0.0	228	0.8	781	9.8	182	2.2
BANDED KILLIFISH	10	0.2	8	*	0	0.0	5	0.1
BAY ANCHOVY	0	0.0	20	0.1	139	1.7	32	0.4
BLACK CRAPPIE	0	0.0	65	0.2	0	0.0	0	0.0
BLUEBACK HERRING	0	0.0	959	3.4	736	9.2	23	0.3
BLUEFISH	0	0.0	134	0.5	352	4.4	600	7.3
BLUEGILL	93	1.9	69	0.2	13	0.2	20	0.2
BROWN BULLHEAD	0	0.0	159	0.6	0	0.0	246	3.0
CARP	0	0.0	0	0.0	0	0.0	0	0.0
CREVALLE JACK	0	0.0	0	0.0	0	0.0	0	0.0
GIZZARD SHAD	0	0.0	0	0.0	0	0.0	0	0.0
GOLDEN SHINER	0	0.0	0	0.0	41	0.5	0	0.0
GOLDFISH	0	0.0	0	0.0	0	0.0	0	0.0
HOGCHOKER	641	12.9	88	0.3	30	0.4	22	0.3
LARGEMOUTH BASS	0	0.0	0	0.0	0	0.0	0	0.0
PUMPKINSEED	368	7.4	3423	12.3	168	2.1	40	0.5
RAINBOW SMELT	24	0.5	86	0.3	0	0.0	24	0.3
REDBREAST SUNFISH	96	1.9	0	0.0	0	0.0	0	0.0
ROUGH SILVERSIDE	0	0.0	0	0.0	77	1.0	69	0.8
SPOT	0	0.0	0	0.0	0	0.0	642	7.8
SPOTTAIL SHINER	3	0.1	20	0.1	0	0.0	16	0.2
STRIPED BASS	0	0.0	93	0.3	400	5.0	797	9.7
TESSELLATED DARTER	14	0.3	10	*	0	0.0	0	0.0
WARMOUTH	0	0.0	0	0.0	0	0.0	0	0.0
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0
WHITE BASS	0	0.0	0	0.0	0	0.0	0	0.0
WHITE CATFISH	63	1.3	101	0.4	14	0.2	763	9.2
WHITE CRAPPIE	2	*	0	0.0	0	0.0	0	0.0
WHITE PERCH	2638	53.0	19108	68.5	4737	59.3	4628	56.1
YELLOW PERCH	54	1.1	40	0.1	82	1.0	0	0.0
TOTAL (KG.)	5.0	100.2	27.9	99.8	8.0	100.1	8.2	100.1
MONTHLY FLOW SAMPLED (MCM)	17.4201		22.5983		30.0132		37.6079	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS
(MCM) Million cubic meters, all units combined

TABLE IV-4 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

BIOMASS AND PERCENT COMPOSITION OF IMPINGEMENT COLLECTIONS
LOVETT GENERATING STATION - 1977

	SEP		OCT		NOV		DEC		TOTAL	
SPECIES	GM.	PCNT	GM.	PCNT	GM.	PCNT	GM.	PCNT	KG.	PCNT
ALEWIFE	138	9.9	101	1.5	224	1.3	0	0.0	2.46	1.2
ALOSA SP	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
AMERICAN EEL	0	0.0	38	0.6	37	0.2	2552	23.3	8.17	3.9
AMERICAN SHAD	0	0.0	4	0.1	5	*	7	0.1	.02	*
ATLANTIC MENHADEN	0	0.0	0	0.0	0	0.0	0	0.0	1.14	0.5
ATLANTIC TOMCOD	20	1.5	0	0.0	0	0.0	20	0.2	2.22	1.1
BANDED KILLIFISH	0	0.0	0	0.0	11	0.1	23	0.2	.19	0.1
BAY ANCHOVY	11	0.8	0	0.0	0	0.0	0	0.0	.20	0.1
BLACK CRAPPIE	0	0.0	0	0.0	19	0.1	0	0.0	.14	0.1
BLUEBACK HERRING	27	1.9	12	0.2	8	*	0	0.0	1.76	0.8
BLUEFISH	0	0.0	0	0.0	0	0.0	0	0.0	1.09	0.5
BLUEGILL	0	0.0	83	1.2	602	3.6	464	4.2	1.64	0.8
BROWN BULLHEAD	0	0.0	17	0.2	188	1.1	0	0.0	1.61	0.8
CARP	0	0.0	0	0.0	2	*	0	0.0	.00	*
CREVALLE JACK	0	0.0	6	0.1	0	0.0	0	0.0	.01	*
GIZZARD SHAD	0	0.0	19	0.3	441	2.6	5218	47.5	41.57	19.8
GOLDEN SHINER	0	0.0	0	0.0	0	0.0	57	0.5	.49	0.2
GOLDFISH	348	25.1	0	0.0	6	*	431	3.9	11.70	5.6
HOGCHOKER	34	2.4	139	2.0	1030	6.1	0	0.0	2.27	1.1
LARGEMOUTH BASS	6	0.4	44	0.6	48	0.3	54	0.5	1.36	0.7
PUMPKINSEED	141	10.1	250	3.6	443	2.6	950	8.7	12.03	5.7
RAINBOW SMELT	0	0.0	21	0.3	39	0.2	20	0.2	.86	0.4
REDBREAST SUNFISH	0	0.0	0	0.0	0	0.0	0	0.0	.10	*
ROUGH SILVERSIDE	29	2.1	0	0.0	0	0.0	0	0.0	.17	0.1
SPOT	0	0.0	1748	25.3	53	0.3	0	0.0	2.44	1.2
SPOTTAIL SHINER	0	0.0	0	0.0	16	0.1	63	0.6	1.48	0.7
STRIPED BASS	11	0.8	150	2.2	242	1.4	45	0.4	7.51	3.6
TESSELLATED DARTER	0	0.0	0	0.0	0	0.0	0	0.0	.03	*
WARMOUTH	0	0.0	0	0.0	40	0.2	0	0.0	.04	*
WEAKFISH	0	0.0	0	0.0	0	0.0	0	0.0	.00	0.0
WHITE BASS	0	0.0	134	1.9	72	0.4	89	0.8	.31	0.1
WHITE CATFISH	140	10.1	314	4.5	1239	7.4	332	3.0	9.22	4.4
WHITE CRAPPIE	0	0.0	0	0.0	0	0.0	0	0.0	.01	*
WHITE PERCH	482	34.8	3832	55.5	12020	71.6	479	4.4	95.51	45.6
YELLOW PERCH	0	0.0	0	0.0	0	0.0	170	1.6	1.88	0.9
TOTAL (KG.)	1.4	99.9	6.9	100.1	16.8	99.6	11.0	100.	209.63	100.0
MONTHLY FLOW SAMPLED (MCM)	25.3548		24.2195		19.9137		15.6386		276.5219	

* LESS THAN 0.1 PERCENT

(GM) GRAMS
(KG) KILLOGRAMS
(MCM) Million cubic meters, all units combined

TABLE IV-5

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2364	.7874	3002.2860	4.7508	14263	
	2	732	.6677	1096.3007	7.1529	7842	
	3	(NO SAMPLE)			7.8940		
	4	181	.5081	356.2291	12.5755	4480	
			MONTH EST.RATE	1484.9386	32.3732		48072
FEB	1	213	.9873	215.7399	5.5692	1201	
	2	339	.8270	409.9154	4.4157	1810	
	3	(NO SAMPLE)			4.4463		
	4	1113	.5783	1924.6066	3.6971	7115	
			MONTH EST.RATE	850.0873	18.1283		15411
MARCH	1	120	.5567	215.5560	3.8826	837	
	2	13	.5685	22.8672	3.9793	91	
	3	124	.6001	206.6322	3.9793	822	
	4	225	.5685	395.7784	4.3005	1702	
			MONTH EST.RATE	210.2085	16.1417		3393
APRIL	1	44	.5626	78.2083	3.8757	303	
	2	388	.5547	699.4772	3.9616	2771	
	3	67	.5689	117.7711	3.9793	469	
	4	22	.5744	38.3008	5.2960	203	
			MONTH EST.RATE	233.4394	17.1126		3995
MAY	1	31	.2902	106.8229	2.6914	288	
	2	6	.2882	20.8189	1.9897	41	
	3	4	.2892	13.8313	2.9331	41	
	4	98	.9533	102.8008	9.8059	1008	
			MONTH EST.RATE	61.0685	17.4201		1064
JUNE	1	1152	.9415	1223.5794	5.8124	7112	
	2	56	.2971	188.4887	4.1780	788	
	3	38	.6586	57.6982	5.2492	303	
	4	423	1.7484	241.9355	7.3587	1780	
			MONTH EST.RATE	427.9255	22.5983		9670
JULY	1	275	.9202	298.8481	5.6763	1696	
	2	11	.9476	11.6083	7.1478	83	
	3	102	.9893	103.1032	7.8894	813	
	4	144	.9439	152.5585	9.2997	1419	
			MONTH EST.RATE	141.5295	30.0132		4248
AUG	1	49	.6495	75.4427	7.8980	596	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-5 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALL FISH SPECIES
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	67	.6586	101.7309	9.2992	946	
		3	(NO SAMPLE)			7.8509		
		4	188	1.5926	118.0460	12.5598	1483	
				MONTH EST.RATE	98.4065	37.6079		3701
	SEPT	1	11	.5527	19.9023	7.9695	159	
		2	11	.5764	19.0840	4.8541	93	
		3	12	.5685	21.1082	6.2371	132	
		4	39	.5981	65.2065	6.2941	410	
				MONTH EST.RATE	31.3253	25.3548		794
	OCT	1	9	.6654	13.5257	4.9316	67	
		2	470	.6745	696.8125	5.5398	3860	
		3	274	.6677	410.3639	5.5398	2273	
		4	102	.7858	129.8040	8.2083	1065	
				MONTH EST.RATE	312.6265	24.2195		7572
	NOV	1	96	.5961	161.0468	4.6859	755	
		2	1077	.6881	1565.1795	5.5398	8671	
		3	354	.6518	543.1114	5.4710	2971	
		4	561	1.4553	385.4875	4.2130	1624	
				MONTH EST.RATE	663.7063	19.9137		13217
	DEC	1	393	.9383	418.8426	5.0935	2133	
		2	31	.2921	106.1280	4.8137	511	
		3	142	.6099	232.8251	2.1732	506	
		4	112	.5757	194.5458	3.5582	692	
				MONTH EST.RATE	238.0854	15.6386		3723
				ANNUAL EST.RATE	396.1123			114860

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-6

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	C	.7874	.0000	4.7508	0	
	2	1	.6677	1.4977	7.1529	11	
	3	(NO SAMPLE)			7.8940		
	4	C	.5081	.0000	12.5755	0	
			MONTH EST.RATE	.4992	32.3732		16
FEB	1	C	.9873	.0000	5.5692	0	
	2	C	.8270	.0000	4.4157	C	
	3	(NO SAMPLE)			4.4463		
	4	C	.5783	.0000	3.6971	0	
			MONTH EST.RATE	.0000	18.1283		0
MARCH	1	C	.5567	.0000	3.8826	C	
	2	C	.5685	.0000	3.9793	0	
	3	C	.6001	.0000	3.9793	0	
	4	C	.5685	.0000	4.3005	0	
			MONTH EST.RATE	.0000	16.1417		C
APRIL	1	C	.5626	.0000	3.8757	0	
	2	C	.5547	.0000	3.9616	0	
	3	C	.5689	.0000	3.9793	C	
	4	C	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.0000	17.1126		0
MAY	1	1	.2902	3.4459	2.6914	9	
	2	1	.2882	3.4698	1.9897	7	
	3	C	.2892	.0000	2.9331	C	
	4	3	.9533	3.1470	9.8059	31	
			MONTH EST.RATE	2.5157	17.4201		44
JUNE	1	9	.9415	9.5592	5.8124	56	
	2	C	.2971	.0000	4.1780	C	
	3	C	.6586	.0000	5.2492	0	
	4	2	1.7484	1.1439	7.3587	8	
			MONTH EST.RATE	2.6758	22.5983		60
JULY	1	6	.9202	6.5203	5.6763	37	
	2	C	.9476	.0000	7.1478	C	
	3	16	.9893	16.1731	7.8894	128	
	4	47	.9439	49.7934	9.2997	463	
			MONTH EST.RATE	18.1217	30.0132		544
AUG	1	3	.6495	4.6189	7.8980	36	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-6 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ALEWIFE
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	7	.6586	10.6286	9.2992	99	
		3	(NO SAMPLE)			7.8509		
		4	17	1.5926	10.6744	12.5598	134	
				MONTH EST.RATE	8.6406	37.6079		325
	SEPT	1	1	.5527	1.8093	7.9695	14	
		2	0	.5764	.0000	4.8541	0	
		3	0	.5685	.0000	6.2371	0	
		4	1	.5981	1.6720	6.2941	11	
				MONTH EST.RATE	.8703	25.3548		22
	OCT	1	0	.6654	.0000	4.9316	0	
		2	18	.6745	26.6864	5.5398	148	
		3	19	.6677	28.4559	5.5398	158	
		4	17	.7858	21.6340	8.2083	178	
				MONTH EST.RATE	19.1941	24.2195		465
	NOV	1	12	.5961	20.1309	4.6899	94	
		2	45	.6881	65.3975	5.5398	362	
		3	4	.6518	6.1369	5.4710	34	
		4	2	1.4553	1.3743	4.2130	6	
				MONTH EST.RATE	23.2599	19.9137		463
	DEC	1	0	.9383	.0000	5.0935	0	
		2	0	.2921	.0000	4.8137	0	
		3	0	.6099	.0000	2.1732	0	
		4	0	.5757	.0000	3.5582	0	
				MONTH EST.RATE	.0000	15.6386		0
				ANNUAL EST.RATE	6.3148			1939

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-7

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	C	.7874	.CCCC	4.75C8	0	
	2	C	.6677	.0000	7.1529	C	
	3	(NO SAMPLE)			7.894C		
	4	C	.5081	.0000	12.5755	C	
			MONTH EST.RATE	.0000	32.3732		0
FEB	1	C	.9873	.0000	5.5692	0	
	2	C	.827C	.0000	4.4157	C	
	3	(NO SAMPLE)			4.4463		
	4	C	.5783	.CCCC	3.6971	0	
			MONTH EST.RATE	.0000	18.1283		0
MARCH	1	C	.5567	.CCCC	3.8826	C	
	2	C	.5685	.0000	3.9793	C	
	3	C	.6CC1	.CCCC	3.9793	C	
	4	C	.5685	.0000	4.3CC5	0	
			MONTH EST.RATE	.0000	16.1417		C
APRIL	1	C	.5626	.0000	3.8757	C	
	2	C	.5547	.CCCC	3.9616	C	
	3	C	.5689	.0000	3.9793	0	
	4	C	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.CCCC	17.1126		C
MAY	1	C	.2902	.0000	2.6914	0	
	2	C	.2882	.CCCC	1.9897	0	
	3	C	.2892	.0000	2.9331	0	
	4	C	.9533	.CCCC	9.8059	C	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	C	.9415	.CCCC	5.8124	C	
	2	C	.2971	.0000	4.1780	0	
	3	C	.6586	.0000	5.2492	C	
	4	C	1.7484	.0000	7.3587	C	
			MONTH EST.RATE	.CCCC	22.5983		C
JULY	1	9	.9202	9.7805	5.6763	56	
	2	C	.9476	.0000	7.1478	C	
	3	C	.9893	.CCCC	7.8894	0	
	4	2	.9439	2.1189	9.2997	20	
			MONTH EST.RATE	2.9749	30.0132		89
AUG	1	C	.6495	.0000	7.8980	0	

NOTE. * LESS THAN C.0001
** LESS THAN 1 FISH

TABLE IV-7 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR AMERICAN SHAD
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	C	.6586	.0000	9.2992	0	
		3	(NO SAMPLE)			7.8509		
		4	1	1.5926	.6279	12.5598	8	
				MONTH EST.RATE	.2093	37.6079		8
	SEPT	1	C	.5527	.0000	7.9695	0	
		2	1	.5764	1.7349	4.8541	8	
		3	C	.5685	.0000	6.2371	0	
		4	C	.5981	.0000	6.2941	C	
				MONTH EST.RATE	.4337	25.3548		11
	OCT	1	C	.6654	.0000	4.9316	0	
		2	2	.6745	2.9652	5.5398	16	
		3	1	.6677	1.4977	5.5398	8	
		4	C	.7858	.0000	8.2083	C	
				MONTH EST.RATE	1.1157	24.2195		27
	NOV	1	1	.5961	1.6776	4.6859	8	
		2	C	.6891	.0000	5.5398	0	
		3	C	.6518	.0000	5.4710	C	
		4	C	1.4553	.0000	4.2130	0	
				MONTH EST.RATE	.4194	19.9137		8
	DEC	1	1	.9383	1.0658	5.0935	5	
		2	C	.2921	.0000	4.8137	0	
		3	C	.6099	.0000	2.1732	0	
		4	C	.5757	.0000	3.5582	0	
				MONTH EST.RATE	.2665	15.6386		4
				ANNUAL EST.RATE	.4516			147

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-6

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW (MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW (MCM)	EST. NO. (RATE X FLOW)	MONTHLY EST. NO.
JAN	1	14	.7874	17.7800	4.7508	84	
	2	14	.6677	20.9675	7.1529	150	
	3	(NO SAMPLE)			7.8940		
	4	1	.5081	1.9681	12.5755	25	
			MONTH EST.RATE	13.5719	32.3732		439
FEB	1	2	.9873	2.0257	5.5692	11	
	2	6	.8270	7.2551	4.4157	32	
	3	(NO SAMPLE)			4.4463		
	4	4	.5783	6.9168	3.6971	26	
			MONTH EST.RATE	5.3992	18.1283		98
MARCH	1	3	.5567	5.3889	3.8826	21	
	2	2	.5685	3.5180	3.9793	14	
	3	3	.6001	4.9992	3.9793	20	
	4	5	.5685	8.7951	4.3005	38	
			MONTH EST.RATE	5.6753	16.1417		92
APRIL	1	C	.5626	.0000	3.8757	C	
	2	C	.5547	.0000	3.9616	0	
	3	C	.5689	.0000	3.9793	0	
	4	C	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.0000	17.1126		0
MAY	1	C	.2902	.0000	2.6914	0	
	2	C	.2882	.0000	1.9897	0	
	3	C	.2892	.0000	2.9331	0	
	4	C	.9533	.0000	9.8059	0	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	329	.9415	349.4424	5.8124	2031	
	2	C	.2971	.0000	4.1780	0	
	3	8	.6586	12.1470	5.2492	64	
	4	231	1.7484	132.1208	7.3587	972	
			MONTH EST.RATE	123.4276	22.5983		2789
JULY	1	118	.9202	128.2330	5.6763	728	
	2	2	.9476	2.1106	7.1478	15	
	3	32	.9893	32.3461	7.8894	255	
	4	7	.9439	7.4160	9.2997	69	
			MONTH EST.RATE	42.5264	30.0132		1276
AUG	1	3	.6495	4.6189	7.8980	36	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-8 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR ATLANTIC TOMCOD
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW (MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW (MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	9	.6586	13.6654	9.2992	127	
		3	(NO SAMPLE)			7.8509		
		4	29	1.5926	18.2092	12.5598	229	
				MONTH EST.RATE	12.1645	37.6079		457
	SEPT	1	2	.5527	3.6186	7.9695	29	
		2	C	.5764	.0000	4.8541	C	
		3	C	.5685	.0000	6.2371	C	
		4	C	.5981	.0000	6.2941	0	
				MONTH EST.RATE	.9047	25.3548		23
	OCT	1	C	.6654	.0000	4.9316	0	
		2	C	.6745	.0000	5.5398	0	
		3	C	.6677	.0000	5.5398	0	
		4	C	.7858	.0000	8.2083	C	
				MONTH EST.RATE	.0000	24.2195		0
	NOV	1	C	.5961	.0000	4.6859	0	
		2	C	.6881	.0000	5.5398	0	
		3	C	.6518	.0000	5.4710	C	
		4	C	1.4553	.0000	4.2130	0	
				MONTH EST.RATE	.0000	19.9137		0
	DEC	1	C	.9383	.0000	5.0935	0	
		2	C	.2921	.0000	4.8137	C	
		3	C	.6099	.0000	2.1732	0	
		4	1	.5757	1.7370	3.5582	6	
				MONTH EST.RATE	.4343	15.6386		7
				ANNUAL EST.RATE	17.0087			5181

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-9

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	C	.7874	.0000	4.7508	0	
	2	C	.6677	.0000	7.1529	0	
	3	(NO SAMPLE)			7.8940		
	4	C	.5081	.0000	12.5755	C	
			MONTH EST.RATE	.0000	32.3732		0
FEB	1	C	.9873	.0000	5.5692	C	
	2	C	.8270	.0000	4.4157	0	
	3	(NO SAMPLE)			4.4463		
	4	C	.5783	.0000	3.6971	0	
			MONTH EST.RATE	.0000	18.1283		C
MARCH	1	C	.5567	.0000	3.8826	0	
	2	C	.5685	.0000	3.9793	C	
	3	C	.6001	.0000	3.9793	0	
	4	C	.5685	.0000	4.3005	0	
			MONTH EST.RATE	.0000	16.1417		C
APRIL	1	C	.5626	.0000	3.8757	0	
	2	C	.5547	.0000	3.9616	0	
	3	C	.5689	.0000	3.9793	0	
	4	C	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.0000	17.1126		0
MAY	1	C	.2902	.0000	2.6914	C	
	2	C	.2882	.0000	1.9897	0	
	3	C	.2892	.0000	2.9331	C	
	4	C	.9533	.0000	9.8059	0	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	2	.9415	2.1243	5.8124	12	
	2	1	.2971	3.3659	4.1780	14	
	3	1	.6586	1.5184	5.2492	8	
	4	13	1.7484	7.4354	7.3587	55	
			MONTH EST.RATE	3.6110	22.5983		82
JULY	1	32	.9202	34.7751	5.6763	197	
	2	2	.9476	2.1106	7.1478	15	
	3	20	.9893	20.2163	7.8894	159	
	4	42	.9439	44.4962	9.2997	414	
			MONTH EST.RATE	25.3996	30.0132		762
AUG	1	4	.6495	6.1586	7.8980	49	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-9 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BAY ANCHOVY
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	4	.6586	6.0735	9.2992	56	
		3	(NO SAMPLE)			7.8509		
		4	17	1.5926	10.6744	12.5598	134	
				MONTH EST.RATE	7.6355	37.6079		287
	SEPT	1	6	.5527	10.8558	7.9695	87	
		2	1	.5764	1.7349	4.8541	8	
		3	C	.5685	.0000	6.2371	C	
		4	2	.5981	3.3439	6.2941	21	
				MONTH EST.RATE	3.9837	25.3548		101
	OCT	1	C	.6654	.0000	4.9316	0	
		2	C	.6745	.0000	5.5398	C	
		3	C	.6677	.0000	5.5398	0	
		4	C	.7858	.0000	8.2083	C	
				MONTH EST.RATE	.0000	24.2195		0
	NOV	1	C	.5961	.0000	4.6899	C	
		2	C	.6881	.0000	5.5398	C	
		3	C	.6518	.0000	5.4710	C	
		4	C	1.4553	.0000	4.2130	0	
				MONTH EST.RATE	.0000	19.9137		0
	DEC	1	C	.9383	.0000	5.0935	C	
		2	C	.2921	.0000	4.8137	C	
		3	C	.6099	.0000	2.1732	0	
		4	C	.5757	.0000	3.5582	0	
				MONTH EST.RATE	.0000	15.6386		C
				ANNUAL EST.RATE	3.3858			1232

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-10

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	C	.7874	.0000	4.7508	C	
	2	C	.6677	.0000	7.1529	C	
	3	(NO SAMPLE)			7.8940		
	4	C	.5081	.0000	12.5755	C	
			MONTH EST.RATE	.0000	32.3732		0
FEB	1	C	.9873	.0000	5.5692	0	
	2	C	.8270	.0000	4.4157	0	
	3	(NO SAMPLE)			4.4463		
	4	C	.5783	.0000	3.6971	C	
			MONTH EST.RATE	.0000	18.1283		0
MARCH	1	C	.5567	.0000	3.8826	C	
	2	C	.5685	.0000	3.9793	0	
	3	C	.6001	.0000	3.9793	0	
	4	C	.5685	.0000	4.3005	0	
			MONTH EST.RATE	.0000	16.1417		0
APRIL	1	C	.5626	.0000	3.8757	0	
	2	C	.5547	.0000	3.9616	C	
	3	C	.5689	.0000	3.9793	0	
	4	C	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.0000	17.1126		0
MAY	1	C	.2902	.0000	2.6914	0	
	2	C	.2882	.0000	1.9897	0	
	3	C	.2892	.0000	2.9331	0	
	4	C	.9533	.0000	9.8059	0	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	32	.9415	33.9883	5.8124	198	
	2	2	.2971	6.7317	4.1760	28	
	3	C	.6586	.0000	5.2492	0	
	4	6	1.7484	3.4317	7.3587	25	
			MONTH EST.RATE	11.0379	22.5983		249
JULY	1	6	.9202	6.5203	5.6763	37	
	2	1	.9476	1.0553	7.1478	8	
	3	2	.9893	2.0216	7.8894	16	
	4	1	.9439	1.0594	9.2997	10	
			MONTH EST.RATE	2.6642	30.0132		80
AUG	1	C	.6495	.0000	7.8980	0	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-10 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR BLUEBACK HERRING
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	C	.6586	.CCCC	9.2992	C	
		3	(NO SAMPLE)			7.85C9		
		4	1	1.5926	.6279	12.5598	8	
				MONTH EST.RATE	.2093	37.6C79		8
	SEPT	1	C	.5527	.0000	7.9695	C	
		2	C	.5764	.CCCC	4.8541	0	
		3	C	.5685	.0000	6.2371	0	
		4	24	.5981	40.1271	6.2941	253	
				MONTH EST.RATE	10.0318	25.3548		254
	OCT	1	C	.6654	.0000	4.9316	C	
		2	14	.6745	20.7561	5.5398	115	
		3	C	.6677	.0000	5.5398	0	
		4	C	.7858	.CCCC	8.2C83	C	
				MONTH EST.RATE	5.1890	24.2195		126
	NOV	1	2	.5961	3.3551	4.6899	16	
		2	6	.6881	8.7197	5.5398	48	
		3	C	.6518	.CCCC	5.471C	C	
		4	C	1.4553	.0000	4.2130	0	
				MONTH EST.RATE	3.0187	19.9137		6C
	DEC	1	C	.9383	.0000	5.0935	0	
		2	C	.2921	.0000	4.8137	0	
		3	C	.6099	.CCCC	2.1732	0	
		4	C	.5757	.CCCC	3.5582	0	
				MONTH EST.RATE	.0000	15.6386		0
				ANNUAL EST.RATE	2.6792			777

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-11

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MGM) SAMPLED	RATE NO./MGM	WEEKLY FLOW(MGM)	EST. NO. (RATEXFLOW).	MONTHLY EST. NO.
JAN	1	66	.7874	83.8202	4.7508	398	
	2	123	.6677	184.2145	7.1529	1318	
	3	(NO SAMPLE)			7.8940		
	4	18	.5081	35.4261	12.5755	446	
			MONTH EST.RATE	101.1536	32.3732		3275
FEB	1	45	.9873	45.5789	5.5692	254	
	2	3	.8270	3.6276	4.4157	16	
	3	(NO SAMPLE)			4.4463		
	4	1	.5783	1.7292	3.6971	6	
			MONTH EST.RATE	16.9786	18.1283		308
MARCH	1	1	.5567	1.7963	3.8826	7	
	2	0	.5685	.0000	3.9793	0	
	3	0	.6001	.0000	3.9793	0	
	4	0	.5685	.0000	4.3005	0	
			MONTH EST.RATE	.4491	16.1417		7
APRIL	1	0	.5626	.0000	3.8757	0	
	2	1	.5547	1.8028	3.9616	7	
	3	0	.5689	.0000	3.9793	0	
	4	0	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.4507	17.1126		8
MAY	1	0	.2902	.0000	2.6914	0	
	2	0	.2882	.0000	1.9897	0	
	3	0	.2892	.0000	2.9331	0	
	4	0	.9533	.0000	9.8059	0	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	0	.9415	.0000	5.8124	0	
	2	0	.2971	.0000	4.1780	0	
	3	0	.6586	.0000	5.2492	0	
	4	0	1.7484	.0000	7.3587	0	
			MONTH EST.RATE	.0000	22.5983		0
JULY	1	0	.9202	.0000	5.6763	0	
	2	0	.9476	.0000	7.1478	0	
	3	0	.9893	.0000	7.8894	0	
	4	0	.9439	.0000	9.2997	0	
			MONTH EST.RATE	.0000	30.0132		0
AUG	1	0	.6495	.0000	7.8980	0	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-11 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR GIZZARD SHAD
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW).	MONTHLY EST. NO.
(CONTD.)	AUG	2	C	.6586	.CCCC	9.2992	C	
		3	(NO SAMPLE)			7.8509		
		4	C	1.5926	.CCCC	12.5598	C	
				MONTH EST.RATE	.0000	37.6079		0
	SEPT	1	C	.5527	.0000	7.9695	C	
		2	C	.5764	.CCCC	4.8541	C	
		3	C	.5685	.CCCC	6.2371	C	
		4	C	.5981	.CCCC	6.2941	C	
				MONTH EST.RATE	.0000	25.3548		C
	OCT	1	C	.6654	.0000	4.9316	C	
		2	C	.6745	.0000	5.5398	C	
		3	2	.6677	2.9954	5.5398	17	
		4	8	.7858	10.1807	8.2083	84	
				MONTH EST.RATE	3.2940	24.2195		80
	NOV	1	2	.5961	3.3551	4.6899	16	
		2	53	.6881	77.0237	5.5398	427	
		3	18	.6518	27.6158	5.4710	151	
		4	37	1.4553	25.4243	4.2130	107	
				MONTH EST.RATE	33.3547	19.9137		664
	DEC	1	207	.9383	220.6117	5.0935	1124	
		2	16	.2921	54.7758	4.8137	264	
		3	81	.6099	132.8087	2.1732	289	
		4	95	.5757	165.0165	3.5582	587	
				MONTH EST.RATE	143.3032	15.6386		2241
				ANNUAL EST.RATE	24.9153			6583

NOTE. * LESS THAN C.0001
** LESS THAN 1 FISH

TABLE IV-12

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	36	.7874	45.7201	4.7508	217	
	2	13	.6677	19.4698	7.1529	139	
	3	(NO SAMPLE)			7.8940		
	4	13	.5081	25.5855	12.5755	322	
			MONTH EST.RATE	30.2585	32.3732		980
FEB	1	12	.9873	12.1544	5.5692	68	
	2	16	.8270	19.3470	4.4157	85	
	3	(NO SAMPLE)			4.4463		
	4	41	.5783	70.8975	3.6971	262	
			MONTH EST.RATE	34.1330	18.1283		619
MARCH	1	14	.5567	25.1482	3.8826	98	
	2	5	.5685	8.7951	3.9793	35	
	3	7	.6001	11.6647	3.9793	46	
	4	0	.5685	.0000	4.3005	0	
			MONTH EST.RATE	11.4020	16.1417		184
APRIL	1	1	.5626	1.7775	3.8757	7	
	2	0	.5547	.0000	3.9616	0	
	3	0	.5689	.0000	3.9793	0	
	4	0	.5744	.0000	5.2960	0	
			MONTH EST.RATE	.4444	17.1126		8
MAY	1	0	.2902	.0000	2.6914	0	
	2	0	.2882	.0000	1.9897	0	
	3	0	.2892	.0000	2.9331	0	
	4	0	.9533	.0000	9.8059	0	
			MONTH EST.RATE	.0000	17.4201		0
JUNE	1	6	.9415	6.3728	5.8124	37	
	2	0	.2971	.0000	4.1780	0	
	3	0	.6586	.0000	5.2492	0	
	4	0	1.7484	.0000	7.3587	0	
			MONTH EST.RATE	1.5932	22.5983		36
JULY	1	1	.9202	1.0867	5.6763	6	
	2	0	.9476	.0000	7.1478	0	
	3	2	.9893	2.0216	7.8894	16	
	4	2	.9439	2.1189	9.2997	20	
			MONTH EST.RATE	1.3068	30.0132		39
AUG	1	2	.6495	3.0793	7.8980	24	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-12 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR STRIPED BASS
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO.FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	2	.6586	3.0367	9.2992	28	
		3	(NO SAMPLE)			7.8509		
		4	8	1.5926	5.0232	12.5598	63	
				MONTH EST.RATE	3.7131	37.6079		140
	SEPT	1	C	.5527	.0000	7.9695	C	
		2	C	.5764	.0000	4.8541	C	
		3	C	.5685	.0000	6.2371	0	
		4	2	.5981	3.3439	6.2941	21	
				MONTH EST.RATE	.8360	25.3548		21
	OCT	1	2	.6654	3.0057	4.9316	15	
		2	10	.6745	14.8258	5.5398	82	
		3	14	.6677	20.9675	5.5398	116	
		4	6	.7858	7.6355	8.2083	63	
				MONTH EST.RATE	11.6086	24.2195		281
	NOV	1	5	.5961	8.3879	4.6899	39	
		2	28	.6881	40.6918	5.5398	225	
		3	8	.6518	12.2737	5.4710	67	
		4	5	1.4553	3.4357	4.2130	14	
				MONTH EST.RATE	16.1973	19.9137		323
	DEC	1	8	.9383	8.5261	5.0935	43	
		2	C	.2921	.0000	4.8137	C	
		3	C	.6099	.0000	2.1732	0	
		4	C	.5757	.0000	3.5582	C	
				MONTH EST.RATE	2.1315	15.6386		33
				ANNUAL EST.RATE	9.4687			2664

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-13

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
LOVETT GENERATING STATION

MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
JAN	1	2096	.7874	2661.9253	4.7508	12646	
	2	510	.6677	763.8161	7.1529	5464	
	3	(NO SAMPLE)			7.8940		
	4	128	.5081	251.9189	12.5755	3168	
			MONTH EST.RATE	1225.8868	32.3732		39686
FEB	1	124	.9873	125.5951	5.5692	699	
	2	282	.8270	340.9915	4.4157	1506	
	3	(NO SAMPLE)			4.4463		
	4	1035	.5783	1789.7285	3.6971	6617	
			MONTH EST.RATE	752.1050	18.1283		13634
MARCH	1	74	.5567	132.9262	3.8826	516	
	2	6	.5685	10.5541	3.9793	42	
	3	47	.6001	78.3203	3.9793	312	
	4	116	.5685	204.0457	4.3005	877	
			MONTH EST.RATE	106.4616	16.1417		1718
APRIL	1	18	.5626	31.9943	3.8757	124	
	2	305	.5547	557.0579	3.9616	2207	
	3	30	.5689	52.7334	3.9793	210	
	4	5	.5744	8.7047	5.2960	46	
			MONTH EST.RATE	162.6226	17.1126		2783
MAY	1	6	.2902	20.6754	2.6914	56	
	2	0	.2882	.0000	1.9897	0	
	3	1	.2892	3.4578	2.9331	10	
	4	58	.9533	60.8413	9.8059	597	
			MONTH EST.RATE	21.2436	17.4201		370
JUNE	1	591	.9415	627.7217	5.8124	3649	
	2	41	.2971	138.0007	4.1780	577	
	3	16	.6586	24.2940	5.2492	128	
	4	83	1.7484	47.4720	7.3587	349	
			MONTH EST.RATE	209.3721	22.5983		4731
JULY	1	38	.9202	41.2954	5.6763	234	
	2	2	.9476	2.1106	7.1478	15	
	3	13	.9893	13.1406	7.8894	104	
	4	19	.9439	20.1293	9.2997	187	
			MONTH EST.RATE	19.1690	30.0132		575
AUG	1	19	.6495	29.2533	7.8980	231	

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

TABLE IV-13 (CONTINUED)

ORANGE AND ROCKLAND UTILITIES, INC.
1977 AQUATIC ECOLOGY STUDIES

WEEKLY ESTIMATED IMPINGEMENT RATE FOR WHITE PERCH
LOVETT GENERATING STATION

	MONTH	WEEKLY INTERVAL	NO. FISH COLLECTED	FLOW(MCM) SAMPLED	RATE NO./MCM	WEEKLY FLOW(MCM)	EST. NO. (RATEXFLOW)	MONTHLY EST. NO.
(CONTD.)	AUG	2	20	.6586	30.3675	9.2992	282	
		3	(NO SAMPLE)			7.8509		
		4	84	1.5926	52.7439	12.5598	662	
				MONTH EST.RATE	37.4549	37.6079		1409
	SEPT	1	1	.5527	1.8093	7.9695	14	
		2	2	.5764	3.4698	4.8541	17	
		3	4	.5685	7.0361	6.2371	44	
		4	4	.5981	6.6878	6.2941	42	
				MONTH EST.RATE	4.7508	25.3548		120
	OCT	1	3	.6654	4.5086	4.9316	22	
		2	357	.6745	529.2810	5.5398	2932	
		3	208	.6677	311.5172	5.5398	1726	
		4	52	.7858	66.1746	8.2083	543	
				MONTH EST.RATE	227.8704	24.2195		5519
	NOV	1	43	.5961	72.1356	4.6859	338	
		2	781	.6881	1135.0095	5.5398	6288	
		3	281	.6518	431.1138	5.4710	2359	
		4	471	1.4553	323.6446	4.2130	1364	
				MONTH EST.RATE	490.4759	19.9137		9767
	DEC	1	110	.9383	117.2333	5.0935	597	
		2	5	.2921	17.1174	4.8137	82	
		3	17	.6099	27.8734	2.1732	61	
		4	5	.5757	8.6851	3.5582	31	
				MONTH EST.RATE	42.7273	15.6386		668
				ANNUAL EST.RATE	275.0117			80980

NOTE. * LESS THAN 0.0001
** LESS THAN 1 FISH

3. Length Frequency

Monthly length frequency data for selected species indicated that young-of-the-year fish dominated impingement collections at Lovett in 1977 (Tables IV-14 through IV-19).

4. Estimated Total Annual Impingement

An estimate of the total number of fish impinged annually for selected species and all species combined was obtained from the monthly plant flow and the mean impingement rate (Tables IV-5 through IV-13). The estimate was computed by the same method used for previous years. The 1977 impingement estimates (fish per million cubic meters and total number of fish per year) were based on actual fish collected from operating screens. No scale-up factor was applied to compensate for screens not operating, screen collection efficiency, recirculation or survival of impinged fish.

An estimated total of 114,860 fish were impinged at Lovett throughout 1977 (Table IV-5). Of these, white perch (Table IV-13) accounted for 80,980 fish, or 71% of the total estimate. An estimated 6,583 gizzard shad (Table IV-11), 5,181 Atlantic tomcod (Table IV-8), and 2,664 striped bass (Table IV-12) were impinged.

TABLE IV-1B

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF ALEWIFE
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	14.3
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	14.3
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	14.3
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	14.3
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	1	100.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	28.6
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	14.3
TOTAL ANALYZED	0		0		0		0		1		7	
MEAN LENGTH									27.8		22.2	
VARIANCE											62.28	

TABLE IV-14 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF ALEWIFE
LOVETT POINT GENERATING STATION - 1977

LENGTH-INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	7	23.3	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	22	73.3	11	91.7	0	.0	5	41.7	2	11.8	0	.0
7.1- 8.0	1	3.3	1	8.3	0	.0	6	50.0	10	58.8	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	1	8.3	4	23.5	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	1	5.9	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	1	100.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	30		12		1		12		17		0	
MEAN LENGTH	6.4		6.6		28.9		7.2		7.7			
VARIANCE	.18		.19				.26		.42			

TABLE IV-15

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	11.1
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	4	22.2
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	7	38.9
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	4	22.2
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	5.6
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	2	16.7	1	11.1	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	3	25.0	1	11.1	1	16.7	0	.0	0	.0	0	.0
12.1- 13.0	4	33.3	2	22.2	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	1	8.3	1	11.1	2	33.3	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	2	33.3	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	2	22.2	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	1	11.1	1	16.7	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	1	8.3	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	1	8.3	1	11.1	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	12		9		6		0		0		18	
MEAN LENGTH	13.3		14.4		14.4						6.4	
VARIANCE	8.78		8.89		2.54						1.03	

TABLE IV-15 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF ATLANTIC TOMCOD
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	2	22.2	3	11.5	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	6	23.1	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	3	33.3	8	30.8	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	7	26.9	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	1	11.1	2	7.7	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	100.0
14.1- 15.0	1	11.1	0	.0	1	100.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	1	11.1	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	1	11.1	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	9		26		1		0		0		1	
MEAN LENGTH	11.4		8.4		14.4						13.1	
VARIANCE	28.07		1.30									

TABLE IV-16

1977 AQUATIC ECOLOGY STUDIES
CRANCE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF BAY ANCHOVY
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	50.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	50.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	0		0		0		0		0		2	
MEAN LENGTH											8.3	
VARIANCE											1.65	

TABLE IV-16 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF BAY ANCHOVY
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	5	38.5	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	7	53.8	3	60.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	1	7.7	2	40.0	1	50.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	1	50.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	13		5		2		0		0		0	
MEAN LENGTH	8.3		8.8		9.8							
VARIANCE	.55		.25		.63							

TABLE IV-17

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF BLUEBACK HERRING
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	3	21.4
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	14.3
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	7.1
TOTAL ANALYZED	0		0		0		0		0		14	
MEAN LENGTH											19.6	
VARIANCE											51.99	

TABLE IV-17 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES,INC

LENGTH-FREQUENCY OF BLUEBACK HERRING
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH JUL NO.	JUL PCNT	AUG NO.	AUG PCNT	SEP NO.	SEP PCNT	OCT NO.	OCT PCNT	NOV NO.	NOV PCNT	DEC NO.	DEC PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
8.1- 9.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	1	100.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	1	100.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	1		1		0		0		0		0	
MEAN LENGTH	28.9		14.6									
VARIANCE												

TABLE IV-16

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF STRIPED BASS
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	5	16.1	5	9.3	1	33.3	0	.0	0	.0	0	.0
7.1- 8.0	11	35.5	17	31.5	1	33.3	1	100.0	0	.0	1	16.7
8.1- 9.0	11	35.5	18	33.3	1	33.3	0	.0	0	.0	1	16.7
9.1- 10.0	0	.0	6	11.1	0	.0	0	.0	0	.0	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	2	3.7	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	2	33.3
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	1	16.7
16.1- 17.0	1	3.2	1	1.9	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	1	3.2	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	1	1.9	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	1	3.2	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	1	1.9	0	.0	0	.0	0	.0	0	.0
35.1- 36.0	0	.0	1	1.9	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
38.1- 39.0	0	.0	1	1.9	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE IV-18 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF STRIPED BASS
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
42.1- 43.0	1	3.2	0	.0	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	1	1.9	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	31		54		3		1		0		6	
MEAN LENGTH	10.1		11.0		7.6		7.7				11.8	
VARIANCE	50.38		67.51		.82						10.70	

TABLE IV-18 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF STRIPED BASS
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
6.1- 7.0	2	100.0	3	75.0	0	.0	1	6.7	4	23.5	0	.0
7.1- 8.0	0	.0	0	.0	0	.0	8	53.3	5	29.4	0	.0
8.1- 9.0	0	.0	1	25.0	0	.0	6	40.0	4	23.5	0	.0
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	3	17.6	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	1	5.9	0	.0
11.1- 12.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
12.1- 13.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
13.1- 14.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
14.1- 15.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
15.1- 16.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
16.1- 17.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
17.1- 18.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
19.1- 20.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
25.1- 26.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
26.1- 27.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
27.1- 28.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
28.1- 29.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
29.1- 30.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
30.1- 31.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
31.1- 32.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
32.1- 33.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
33.1- 34.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
34.1- 35.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
35.1- 36.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
36.1- 37.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
37.1- 38.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
38.1- 39.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
39.1- 40.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
40.1- 41.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0

TABLE IV-18 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC

LENGTH-FREQUENCY OF STRIPED BASS
LOVETT POINT GENERATING STATION - 1977

LENGTH INTERVAL (CM)	NUMBER OF FISH											
	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
(CONT'D)												
41.1- 42.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
42.1- 43.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
43.1- 44.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	2		4		0		15		17		0	
MEAN LENGTH	6.6		7.2				7.7		8.1			
VARIANCE	.05		.87				.35		1.38			

TABLE IV-19

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH

LOVETT GENERATING STATION

INTERVAL (CM)	JAN		FEB		MAR		APR		MAY		JUN	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	1	.3	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	71	23.7	56	19.6	8	5.2	0	.0	1	1.6	2	1.0
6.1- 7.0	131	43.7	128	44.8	22	14.2	13	9.8	10	15.6	9	4.7
7.1- 8.0	27	9.0	29	10.1	15	9.7	19	14.3	4	6.3	11	5.7
8.1- 9.0	3	1.0	1	.3	2	1.3	1	.8	1	1.6	8	4.1
9.1- 10.0	4	1.3	2	.7	3	1.9	2	1.5	1	1.6	1	.5
10.1- 11.0	4	1.3	6	2.1	10	6.5	12	9.0	0	.0	1	.5
11.1- 12.0	4	1.3	14	4.9	29	18.7	40	30.1	1	1.6	7	3.6
12.1- 13.0	2	.7	3	1.0	16	10.3	12	9.0	3	4.7	7	3.6
13.1- 14.0	4	1.3	4	1.4	7	4.5	11	8.3	6	9.4	6	3.1
14.1- 15.0	4	1.3	6	2.1	7	4.5	6	4.5	7	10.9	13	6.7
15.1- 16.0	4	1.3	4	1.4	10	6.5	6	4.5	7	10.9	15	7.8
16.1- 17.0	9	3.0	8	2.8	10	6.5	5	3.8	6	9.4	32	16.6
17.1- 18.0	12	4.0	10	3.5	4	2.6	3	2.3	12	18.8	42	21.8
18.1- 19.0	7	2.3	7	2.4	6	3.9	2	1.5	2	3.1	26	13.5
19.1- 20.0	8	2.7	5	1.7	3	1.9	1	.8	3	4.7	10	5.2
20.1- 21.0	3	1.0	1	.3	2	1.3	0	.0	0	.0	2	1.0
21.1- 22.0	1	.3	1	.3	1	.6	0	.0	0	.0	1	.5
22.1- 23.0	0	.0	1	.3	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	1	.3	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	300		286		155		133		64		193	
MEAN LENGTH	8.6		8.6		11.7		11.4		13.5		15.1	
VARIANCE	19.37		17.22		16.07		9.54		18.80		15.36	

TABLE IV-19 (CONTINUED)

1977 AQUATIC ECOLOGY STUDIES
ORANGE AND ROCKLAND UTILITIES, INC.

LENGTH-FREQUENCY OF WHITE PERCH

LOVETT GENERATING STATION

INTERVAL (CM)	JUL		AUG		SEP		OCT		NOV		DEC	
	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT	NO.	PCNT
.1- 1.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
1.1- 2.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
2.1- 3.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
3.1- 4.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
4.1- 5.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
5.1- 6.0	0	.0	15	20.3	0	.0	2	2.0	6	2.5	4	4.9
6.1- 7.0	0	.0	25	33.8	0	.0	29	28.7	48	19.9	28	34.6
7.1- 8.0	0	.0	1	1.4	0	.0	56	55.4	109	45.2	36	44.4
8.1- 9.0	0	.0	0	.0	0	.0	11	10.9	53	22.0	12	14.8
9.1- 10.0	0	.0	0	.0	0	.0	0	.0	2	.8	0	.0
10.1- 11.0	0	.0	0	.0	0	.0	0	.0	2	.8	0	.0
11.1- 12.0	1	5.0	0	.0	0	.0	2	2.0	6	2.5	0	.0
12.1- 13.0	1	5.0	1	1.4	0	.0	0	.0	6	2.5	1	1.2
13.1- 14.0	2	10.0	1	1.4	0	.0	1	1.0	4	1.7	0	.0
14.1- 15.0	0	.0	2	2.7	0	.0	0	.0	2	.8	0	.0
15.1- 16.0	1	5.0	4	5.4	0	.0	0	.0	2	.8	0	.0
16.1- 17.0	2	10.0	2	2.7	1	25.0	0	.0	0	.0	0	.0
17.1- 18.0	1	5.0	8	10.8	0	.0	0	.0	0	.0	0	.0
18.1- 19.0	6	30.0	5	6.8	1	25.0	0	.0	1	.4	0	.0
19.1- 20.0	3	15.0	6	8.1	0	.0	0	.0	0	.0	0	.0
20.1- 21.0	2	10.0	2	2.7	2	50.0	0	.0	0	.0	0	.0
21.1- 22.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
22.1- 23.0	0	.0	1	1.4	0	.0	0	.0	0	.0	0	.0
23.1- 24.0	0	.0	1	1.4	0	.0	0	.0	0	.0	0	.0
24.1- 25.0	1	5.0	0	.0	0	.0	0	.0	0	.0	0	.0
TOTAL ANALYZED	20		74		4		101		241		81	
MEAN LENGTH	17.6		11.4		19.2		7.5		8.1		7.4	
VARIANCE	9.97		36.05		3.56		1.12		3.32		.98	

BIBLIOGRAPHY

Hile, R. 1948. A monograph for the computation of the growth of fish from scale measurements. Trans. Amer. Fish. Soc. 78:156-162.

Report ORU74D2

LOVETT GENERATING STATION
ENTRAINMENT SURVIVAL
1977 ANNUAL REPORT

Prepared for

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared by

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

August 1978

CONTENTS

		Page
1.	INTRODUCTION	1-1
	1.1 SITE DESCRIPTION	1-1
	1.2 THE POWER PLANT	1-1
	1.3 THE STUDY OBJECTIVE	1-4
2.	SUMMARY	2-1
3.	METHODS	3-1
	3.1 FIELD METHODOLOGY	3-1
	3.2 ANALYTICAL METHODOLOGY	3-10
4.	RESULTS AND DISCUSSION	4-1
	4.1 NUMBERS, SEASONAL DISTRIBUTION, AND LENGTH FREQUENCY OF ORGANISMS COLLECTED	4-1
	4.2 INTAKE AND DISCHARGE SURVIVAL	4-11
	4.2.1 Initial and 96-Hour Survival	4-11
	4.2.2 Latent Survival	4-11
	4.3 THERMAL EFFECT ON SURVIVAL	4-15
	4.4 LENGTH ANALYSIS OF STRIPED BASS SURVIVAL	4-22
	4.5 ENTRAINMENT SURVIVAL	4-22
	REFERENCES	

LIST OF FIGURES

Number	Title
1-1	Schematic diagram of the intake and discharge locations at the Lovett plant.
3-1	Design of the larval collection tables used in the Lovett entrainment survival studies in 1977.
3-2	Design of the ambient water injection system.
3-3	Work flow diagram of ichthyoplankton survival determination.
4-1	Seasonal distribution of ichthyoplankton collected for survival analysis at the Lovett plant in 1977.
4-2	Mean daily conductivity measured at the Lovett plant intake, 1977.
4-3	Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Lovett plant, 1977.
4-4	Latent survival of white perch post-yolk-sac larvae collected at the intake and discharge of the Lovett plant, 1977.
4-5	Latent survival of striped bass juveniles collected at the intake and discharge of the Lovett plant, 1977.
4-6	Latent survival by length interval of striped bass collected at the Lovett plant, 1977.

LIST OF TABLES

Number	Title
1-1	Plant design data for the Lovett Generating Station.
1-2	Calculated maximum time/temperature regime of exposure during transit through the Lovett Unit 5 cooling water system.
3-1	Sampling gear used to collect ichthyoplankton for entrainment viability at the Lovett plant.
3-2	Sampling procedure summary for ichthyoplankton viability collections at the Lovett plant.
3-3	Summary of entrainment viability sampling effort during 1977 at the Lovett plant.
3-4	Water chemistry collection apparatus used at the Lovett plant during 1977.
3-5	List of primary literature sources used in laboratory identification of ichthyoplankton.
4-1	Total number of each taxon and life stage collected for survival determinations at the Lovett plant, 1977.
4-2	Taxa nomenclature.
4-3	Daily ambient water temperature, dissolved oxygen, and pH measured at the Lovett plant intake, 1977.
4-4	Length-frequency distribution by sampling week of striped bass collected at the Lovett plant intake and discharge, 1977.
4-5	Length-frequency distribution by sampling week of white perch collected at the Lovett plant intake and discharge, 1977.
4-6	Length-frequency distribution by sampling week of clupeids collected at the Lovett plant intake and discharge, 1977.
4-7	Length-frequency distribution by sampling week of bay anchovy collected at the Lovett plant intake and discharge, 1977.
4-8	Mean initial and 96-hour survival of each taxon and life stage collected at the Lovett plant in 1977.
4-9	Mean initial and 96-hour survival of the four most abundant taxa collected at the Lovett plant in 1977, by life stage.
4-10	Latent survival of larval and juvenile fishes collected at the intake and discharge during entrainment survival sampling at the Lovett plant, 1977.

LIST OF TABLES (CONT.)

Number	Title
4-11	Latent survival of live larval and juvenile fishes collected at the intake and discharge during entrainment survival sampling at the Lovett plant, 1977.
4-12	Latent survival of stunned larval fishes collected at the intake and discharge during entrainment survival sampling at the Lovett plant, 1977.
4-13	Survival of ichthyoplankton at the intake and discharge of the Lovett plant as a function of discharge temperature, 1977.
4-14	Initial survival of striped bass collected at the Lovett plant intake and discharge as a function of life stage and species length, 1977.
4-15	Latent survival of striped bass collected at the intake and discharge of the Lovett plant as a function of length (all stages combined), 1977.
4-16	Entrainment survival of ichthyoplankton at the Lovett plant, 1977.
4-17	Entrainment survival from nonthermal effects at the Lovett plant, 1976-1977.

CHAPTER 1: INTRODUCTION

Conventional power plants using a once-through cooling water system require the availability of a large body of water to supply steam-cooling condensers and auxiliary systems. Aquatic organisms in the waterbody that are small enough to pass through the 9.5-mm bar mesh screens at the plant intake structure are entrained and pumped through the condenser system. This process exposes these planktonic organisms to abrupt changes in temperature, hydrostatic pressure, mechanical buffeting, and velocity shear forces. Among the organisms subject to entrainment are the early life stages (larvae and juveniles) of fish.

1.1 SITE DESCRIPTION

The Lovett Generating Station is situated on the west bank of the Hudson River Estuary, approximately 67.5 km north of the southern tip of Manhattan. The river is about 1.2 km wide and has a cross-sectional area of 15,000 m^2 at the Lovett site. Flow rates at this location, as in the lower estuary in general, are controlled predominantly by the tides. The tidal flow has an average rate of 5,000 m^3/sec during spring freshet. Salinity in the vicinity of the plant ranges from that characteristic of freshwater up to about 25 percent of that characteristic of seawater. Seasonal trends are primarily controlled by the amount of freshwater discharge from the watershed. During periods of low runoff, however, the salinity in the vicinity of Lovett may fluctuate rapidly as a function of tidal stage and height.

1.2 THE POWER PLANT

The Lovett Generating Station is a five-unit, fossil-fueled steam electric generating plant. Unit 1 became operational in February 1949, Unit 2 in July 1951, Unit 3 in March 1955, Unit 4 in May 1966, and Unit 5 in April 1969. Generating capacities of the units range from a low of 19 MWe for Unit 1 to a high of 202 MWe for Unit 5. The station has a total generating capacity of 501 MWe, and a maximum condenser cooling water flow of 20.3 m^3/sec. Design characteristics for each unit are summarized in Table 1-1.

The locations of the intake and discharge structures for the cooling water circulating systems of the five units are shown in Figure 1-1. Each system incorporates standard bar racks and 1-cm mesh vertical traveling screens for removal of debris. Cooling water is discharged through ports at the river shoreline. Each unit has two circulating water pumps which can be operated individually or in combination. Two circulating pumps are used in normal operation. When on line, Units 3, 4, and 5 are normally operated at about 90 percent of capacity during the day and at 30-40 percent of capacity at night.

During their passage through the power plant cooling-water system, non-screenable organisms are subjected to various types and magnitudes of exposures including changes in temperature and pressure, chlorination, mechanical impact against surfaces, and other mechanical forces associated with turbulence and acceleration.

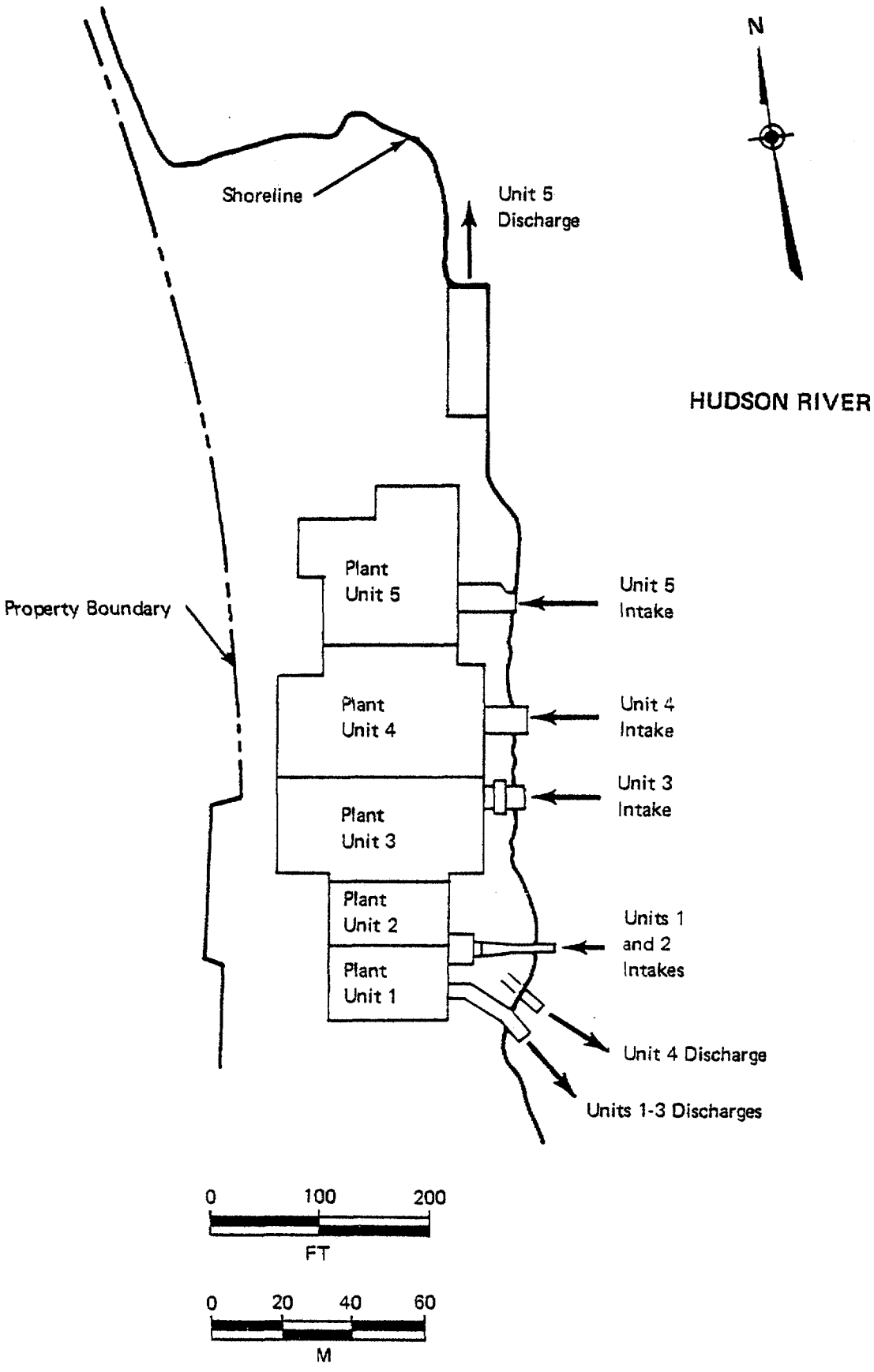


Figure 1-1. Schematic diagram of the intake and discharge locations at the Lovett plant.

TABLE 1-1 PLANT DESIGN DATA FOR THE LOVETT GENERATING STATION

Generator Characteristics	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
Maximum generating capacity (MWe)	19	20	63	197	202
Cooling-water flow rate (m^3/sec):					
Condenser	1.59 (25,000 gpm)	1.59 (25,000 gpm)	2.66 (42,000 gpm)	6.57 (104,000 gpm)	7.56 (120,000 gpm)
Service	0.06 (1,000 gpm)	0.06 (1,000 gpm)	0.06 (1,000 gpm)	0.13 (2,000 gpm)	0.13 (2,000 gpm)
Cooling-water temperature rise (C) (max)	10.0 (18 F)	11.1 (20 F)	12.2 (22 F)	11.1 (20 F)	12.2 (22 F)
Intake Characteristics					
Maximum approach velocity to screens (m/sec)	0.46 (1.5 fps)	0.46 (1.5 fps)	0.56 (1.8 fps)	0.50 (1.6 fps)	0.61 (2.0 fps)
Discharge Characteristics					
Total length of discharge tunnel (m)	--	--	85	115	60
Cross-sectional area of discharge tunnel (m^2)	19.6	19.6	19.6	7.0	2.6 (10.5)*
Tunnel velocity (m/sec) (max)	0.3 (1.0 fps)	0.3 (1.0 fps)	0.3 (1.0 fps)	1.0 (3.3 fps)	3.0 (0.8)* (9.8 fps)
Discharge canal length (m)	--	--	--	--	40
Canal cross-sectional area (m^2)	--	--	--	--	20

Note: Double dashes indicate no data available or data not applicable.

*Discharge pipe expands gradually over 30 ft prior to entry into the discharge canal from a diameter of 6 ft to an outfall diameter of 12 ft.

Temperature elevations in the circulating water system are a function of generating load and coolant flow. For a given rate of heat rejection, an increase in cooling water flow will reduce the delta-T to which the entrained organism is exposed and decrease the duration of exposure (i.e., transit time through the system). However, one may expect a corresponding increase in the number of organisms entrained as flow increases. In addition, the potential for velocity-related mechanical damage to organisms may be increased. Calculated maximum temperature/time regimes of exposure for standard pumping mode at the Lovett plant Unit 5 are presented in Table 1-2. Under the normal operating mode during periods of high electrical demand (two pumps, full flow), entrained organisms would be exposed to maximum temperature elevations of 12 C (22 F) for about 2.1 minutes. Generating output required from Lovett is a function of electrical demand and during 1977 was generally less than the generating capacity of the plant. For this reason, temperature elevations observed in the condenser cooling water of Unit 5 during 1977 were generally lower than the maximum predicted values.

1.3 THE STUDY OBJECTIVE

The objective of the research program described in this annual report was to determine the effect of the condenser cooling water system at the Lovett Generating Station on the survival of entrained Hudson River ichthyoplankton. These studies were a continuation of earlier work performed by Ecological Analysts (1976, 1977) and were designed to determine survival shortly after collection (initial survival) and over a period of 4 days following collection to assess any latent entrainment effects. The effect of thermal exposure during entrainment was investigated by observing survival as a function of plant discharge temperature and by relating field observations to thermal relationships observed in laboratory experiments. The mechanical effect of the entrainment process was examined by determining through-plant survival at discharge temperatures well below upper thermal tolerance limits.

These studies focused on the early developmental stages of striped bass (*Morone saxatilis*), white perch (*Morone americana*), members of the clupeid family (alewife and blueback herring), and the bay anchovy (*Anchoa mitchilli*). The early life stages of other taxa collected and studied included tessellated darter (*Etheostoma olmstedi*), rainbow smelt (*Osmerus mordax*), winter flounder (*Pseudopleuronectes americanus*), American eel (*Anguilla rostrata*), as well as yellow perch (*Perca flavescens*) and silversides (*Menidia* sp.).

TABLE 1-2 CALCULATED MAXIMUM TIME/TEMPERATURE REGIME OF EXPOSURE DURING TRANSIT THROUGH THE LOVETT UNIT 5 COOLING WATER SYSTEM

Number of Pumps Operating	System Section	Transit Time τ (min)	ΔT(C)
2	Intake - condenser feed	0.2	--
2	Condenser feed - canal	0.4	12.2
2	Canal - effluence	1.7	12.2

CHAPTER 2: SUMMARY

Striped bass, white perch, bay anchovy, and clupeids were the most abundant taxa collected during survival studies performed at the intake and discharge of the Lovett plant. Post-yolk-sac larvae were collected in higher numbers than the other life stages for all taxa. Seasonal distribution patterns of these species more closely resembled those observed in 1975 than 1976. Striped bass and white perch were collected concurrently with clupeids. Peak numbers of these species appeared in survival collections during the first half of June. Bay anchovy were collected in peak numbers from late June to early July.

Length measurements were performed on all taxa collected for survival analysis. The length frequencies for the four major taxa were generally comparable between the intake and discharge stations. Initial survival of ichthyoplankton collected at the intake in 1977 (controls) was consistent with that measured in 1976. Ninety-six-hour survival was higher than or approximately the same as that of organisms collected at the intake in 1976. Initial and 96-hour survival at the discharge was high for Morone post-yolk-sac larvae and juveniles. Clupeid and bay anchovy survival was low at both the intake and discharge.

Latent survival was determined for observation periods up to 96 hours following collection. The similarity between the shape of intake and discharge latent survival curves indicated that most of the observed latent mortality resulted from stress incurred during collection and holding. Latent survival results indicated that juveniles were more resistant to sampling and holding stress than larvae of the same species.

No significant effect of thermal exposure on survival was observed at discharge temperatures up to 30.0 C. The majority of all organisms obtained for survival analysis in 1977 were collected at discharge temperatures below critical thermal tolerance levels (33.0 C). This factor was found to be the primary reason for improved survival of organisms collected at the discharge in 1977 as compared to results of the 1976 study when discharge temperatures exceeded critical thermal tolerance levels.

Initial and latent survival of striped bass was observed as a function of species length. The results indicated that initial and 96-hour survival generally improved with increase in organism size at both sampling stations, although this trend was more clearly evident for controls (intake specimens). Latent mortality of the smaller organisms collected at both stations occurred primarily during the first 24 hours following collection with a lower mortality rate for the remainder of the latent effects holding period. Larger fish (length >11.9 mm) were found to be more resistant to stresses associated with collection and holding. Any decreases in survival for this size group generally occurred during the first 6 hours of holding; the survival curves then leveled off and remained constant thereafter.

Entrainment survival estimates at discharge temperatures below 30 C for the 1977 sampling season at the Lovett plant were 90 and 100 percent for striped bass and white perch, respectively. Sample sizes for all other species and life stages were too small to analyze.

CHAPTER 3: METHODS

3.1 FIELD METHODOLOGY

Ichthyoplankton entrainment survival sampling was performed at the intake and discharge of the Lovett plant in 1977. Changes in sampling procedures and gear between 1976 and 1977 are summarized in Tables 3-1 and 3-2. Samples were collected near the bottom at the intake in front of the Unit 5 trash racks and near the surface in the discharge canal of Unit 5. Samples were collected on 2 nights per week at the Lovett plant during the peak of the spawning season for clupeids, striped bass, white perch, and bay anchovy. An average of seven samples per station per night were collected. A total of 14 days of sampling occurred during 1977 (Table 3-3).

Samples were pumped into a larval collection table at the intake and discharge stations using a 4-in. diameter Midland Midwhirl pump (Figure 3-1). The duration of each collection was 15 minutes, resulting in a mean sample volume of approximately 10 m^3 (9.0 - 13.5 m^3). Water quality parameters (conductivity, dissolved oxygen, and pH) were measured (Table 3-4) during the initial, middle, and final samples of each night at the intake. Temperature was measured at both stations during each sample.

Prior to the initiation of the summer sampling season (2 June - 6 July), an ambient water injection system was integrated into the basic larval table design at each station in an attempt to simulate the actual organism post-entrainment experience. Average transit time is 2-4 minutes from the condenser to the end of the discharge canal. Organisms collected at the discharge are exposed to elevated temperatures for 30 to 40 minutes in the larval table (sample duration + table drain time). The ambient water injection system was designed to mitigate the prolonged thermal exposure (time-temperature) in the collection table and, therefore, to provide conditions more closely resembling those encountered by an organism during transit through the circulating water system and reentry into the river.

Ambient water was pumped from the river via a 2-in. diameter gas-powered pump, through an in-line filter (397 μ) and injection system built into the false bottom of the section labeled "B" in Figure 3-1 and illustrated in Figure 3-2. The nozzles of the injection system were designed to diffuse the cooler ambient water into the warm discharge water at the rate of approximately 75 liter/minute. The ambient water pump was started at approximately the same time as the sampling pump and was allowed to run for the duration of the collection (15 minutes). This modification provided an effective reduction of 10-15 percent in the delta-T in the collection box.

After both intake and discharge tables were filled, sample collection began simultaneously by removing the 505-μ net (used to prevent contamination of the sample while the tables fill) from the head of the table. Following the 15-minute sample the pump was turned off and the table drained rapidly by

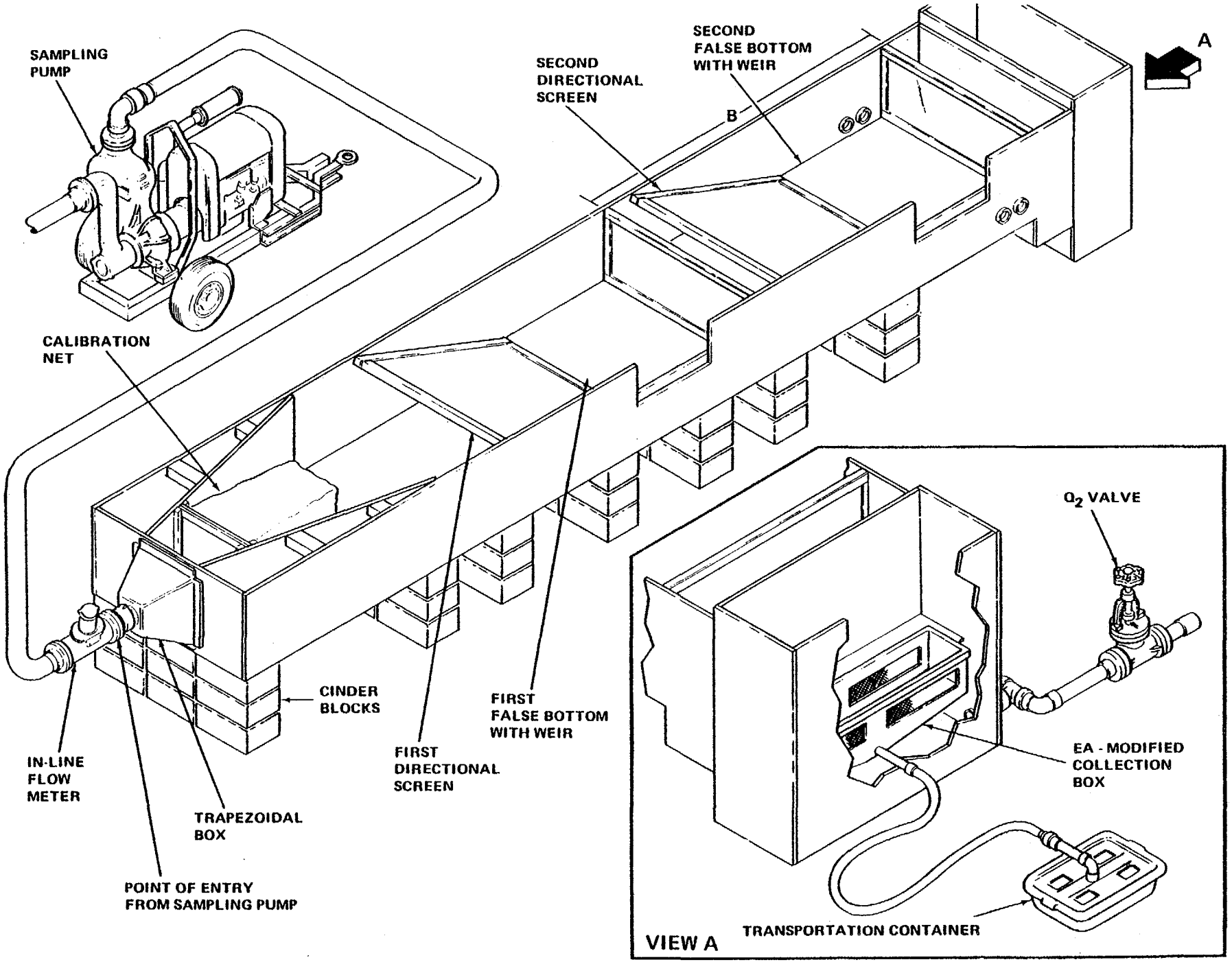


Figure 3-1. Design of the larval collection tables used in the Lovett entrainment survival studies in 1977.

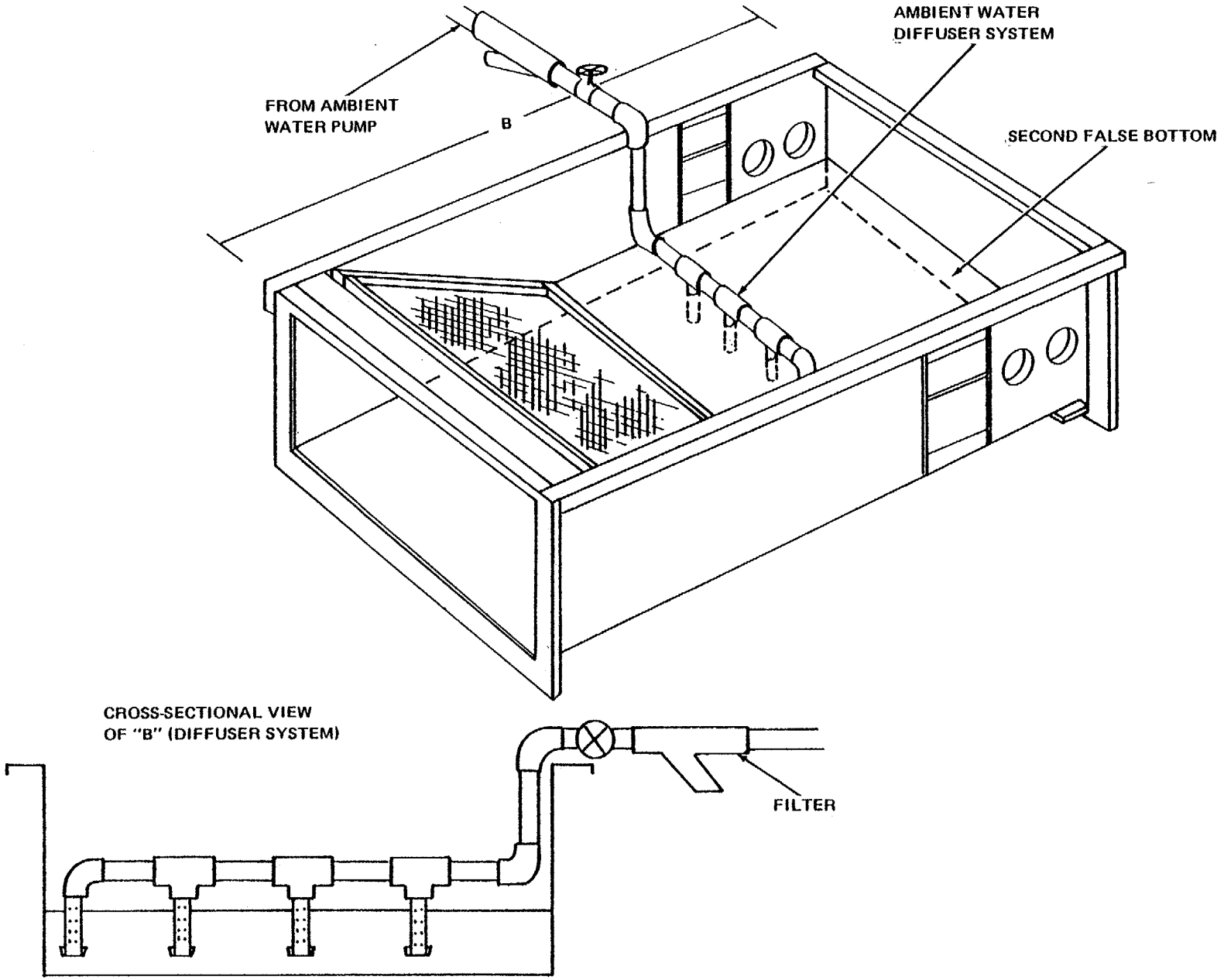


Figure 3-2. Design of the ambient water injection system (magnification of section "B", Figure 2-1).

TABLE 3-1 SAMPLING GEAR USED TO COLLECT ICHTHYOPLANKTON FOR ENTRAINMENT VIABILITY AT THE LOVETT PLANT

Year	Station[a]	Sampling Gear[b]	Number of Screens	Mesh Size (μ)	Collection Box Type	Sample Container Type	Hose Type	Number of Pumps	Pump[c] Type	rpm	Method of Flow Determination	Flow (liters/minute)	Pump to Water Surface (m)	Hose Intake to Water Surface (m)	Hose Intake Orientation to Flow[d]	Hose Pump to Table (m)	Elevation of Hose Above Water Surface			
																	Before Pump		After Pump	
																	Max.	Min.	Max.	Min.
1976 (winter)	Intake	Floating net		505	N/A	3-in. codend	4-in. Flex	1	Midwhirl	--	55 gal drum	400-500	3.5-5.5	1-3	90°	7.5	5.5	3.5	5.5	4.0
	D5	Floating net		505	N/A	3-in. codend	4-in. Flex	1	Midwhirl	--	55 gal drum	400-500	3.5-5.5	1-3	90°	7.5	5.5	3.5	5.5	4.0
1976 (summer)	Intake	Plywood larval table	2	505	Siphon	Closed box	4-in. Flex	1	Homelite	1,700	Tableweir	375-1,150	2.5-4.5	1-3	90°	7.5	4.5	2.5	3.5	2.0
	D5		2	505	Siphon	Closed box	4-in. Flex	1	Homelite	1,700	Tableweir	365-1,200	2.5-4.5	1-3	90°	1.5	4.5	2.5	3.5	2.0
1977	Intake	Plywood larval table	2	505	Siphon	Closed box	4-in. Flex	1	Midwhirl	900	--	--	3.5-5.5	1-3	90°	7.5	5.5	3.5	4.0	2.5
	D5		2	505	Siphon	Closed box	4-in. Flex	1	Midwhirl	900	--	--	3.5-5.5	1-3	90°	2.5	5.5	3.5	4.0	2.5

(a) D5 = Unit 5 discharge; intake = Unit 5 intake.
(b) Table intake orifice 1.0 m above ground level.
(c) Midwhirl intake orifice 1.5 m above ground with vortex impeller;
Homelite intake orifice 0.5 m above ground with open-face centrifigal impeller.
(d) Semi rigid flex hose deployed perpendicular to current and
swept in direction of current by the force of the water.

TABLE 3-2 SAMPLING PROCEDURE SUMMARY FOR ICHTHYOPLANKTON VIABILITY COLLECTIONS AT THE LOVETT PLANT

Year	Station[a]	Sample Duration (min)	Sample Volume (m^3)	No. of Table Weirs	No. of Q1 Drains	Q2 Flow Rate (liter/min)			Collection Box Drain Method	Wash Water	Ambient Dilution System	Simultaneous		Drain Time (min)
						Sample	Table Drain	Collection Box Drain				Collection	Sort	
1976 (winter)	Intake	15	6.0- 7.5							Ambient		✓		
	D5	15	6.0- 7.5							Ambient		✓		
1976 (summer)	Intake	15	5.6-17.2	1	2 pair	76	133	38	Siphon	Ambient		✓	✓	30
	D5	15	5.5-18.0	1	2 pair	76	133	38	Siphon	Ambient		✓	✓	30
1977	Intake	15	--	1 pair	2 pair	76	133	38	Siphon	Ambient	✓	✓	✓	30
	D5	15	--	1 pair	2 pair	76	133	38	Siphon	Ambient	✓	✓	✓	30

(a) Intake = Unit 5 intake; D5 = Unit 5 discharge.

TABLE 3-3 SUMMARY OF ENTRAINMENT VIABILITY SAMPLING EFFORT DURING 1977 AT THE LOVETT PLANT

Date	Number of Runs		Major Species
	Intake	Discharge V	
2 JUN	5	5	White perch/striped bass
7 JUN	7	7	White perch/striped bass
9 JUN	6	6	White perch/striped bass
10 JUN	7	7	White perch/striped bass
14 JUN	7	7	White perch/striped bass
16 JUN	7	7	White perch/striped bass
17 JUN	6	6	White perch/striped bass
21 JUN	7	7	White perch/striped bass
23 JUN	8	8	White perch/striped bass
24 JUN	7	7	White perch/striped bass
28 JUN	7	7	White perch/striped bass
30 JUN	7	7	White perch/striped bass
1 JUL	7	7	White perch/striped bass
5 JUL	7	7	White perch/striped bass

TABLE 3-4 WATER CHEMISTRY COLLECTION APPARATUS USED AT THE LOVETT PLANT DURING 1977

Parameter	Primary Meter	Alternate
Conductivity (μmhos/cm)	Martek (MKV)	YSI, SCT (Model 33)
Dissolved oxygen (ppm)	Martek (MKV)	Winkler titration
pH	Martek (MKV)	Inst. Lab. Inc.-- Model 175

opening the Q1 and Q2 valves (Figure 3-1, Table 3-3). The entire table was gently rinsed throughout the drain period. The drain rate was decreased when the water level reached the collection box and organisms collected in the table were drained into a detachable transportation container which also served as a sorting tray. The tables were thoroughly washed between collections to remove any remaining detritus or organisms. Table washes were collected and preserved with 10 percent buffered formalin for subsequent examination.

Intake and discharge samples were sorted simultaneously in an onsite laboratory. Larval and juvenile fish were classified as live, stunned, or dead, based upon the following criteria:

Live:	swimming vigorously, no orientation problems
Stunned:	swimming abnormally, struggling, no movement except in response to gentle probing
Dead:	no vital life signs; no body or opercular movement, no response to gentle probing.

Live and stunned fish were carefully transferred to separate holding containers (1-quart Ball jars) with a large-bore glass pipette. A maximum of five larvae were placed in each container, which was aerated and maintained in an ambient water trough. Care was exercised to separate the very young larvae from the older larvae and juveniles to reduce the possibility of cannibalism. Dead specimens were preserved for later identification.* The duration of the sorting process varied depending on the amount of detritus and the number and age of the organisms. While this period generally ranged from 15 to 60 minutes, the average duration was 30 minutes.

Partial organisms were handled in the following manner: if approximately 50 percent or more of an organism was present, that organism was included in the initial dead count; less than 50 percent of an organism was not included in the analysis. These criteria were chosen as the most reasonable alternative because the precise origin of smaller fragments would be difficult to determine conclusively.

Live and stunned organisms from the initial sort were examined at 3, 6, 12, 24, 48, 72, and 96 hours after sample collection. Any dead organisms were removed from the holding jars and preserved in vials. All organisms remaining alive after 96 hours were also preserved. Species and life-stage determinations were facilitated by reference to the available literature (Table 3-5) and to a reference collection. Owing to the difficulty involved in differentiation of the early life stages of alewife and blueback herring, these two species were grouped under the classification clupeids; all other members of the family Clupeidae were identified to species. Length measurements were performed on all species collected.

* All sorted ichthyoplankton were preserved in 5 percent buffered formalin; residual detritus and invertebrates were preserved with 10 percent buffered formalin.

TABLE 3-5 LIST OF PRIMARY LITERATURE SOURCES USED IN LABORATORY IDENTIFICATION OF ICHTHYOPLANKTON

Chambers et al. 1969
Cianci 1969
Mansueti and Hardy 1967
Scotton et al. 1973
Leim 1924
Lippson and Moran 1974
Hildebrand and Schroeder 1928
Bigelow and Schroeder 1953
Booth 1967
Mansueti 1958
Bayless 1972
Doroshev 1970
Rathjen and Miller 1957
Dovel and Edmonds 1971
Krester 1968
Bath 1974
Wang and Kernehan 1978 (in press)

Quality assurance procedures in the laboratory consisted of a color-coded labeling system for jars and vials, records of the number of live and dead at each check time, and immediate checks of the sorted sample. The efficiency of sorting and the accuracy and consistency of species/life-stage identifications were also determined and documented. Organisms not found in the initial sort or collected from the table washdown were used to evaluate collection efficiency but were not entered in viability calculations. Proportion defective analysis was used to assure the quality level of organism identification. This is an acceptance sampling procedure which provides an average outgoing quality level (AOQL) of no more than 10 percent error. Quality and consistency of the survival studies were also assured by strict adherence to standard operating procedures. The general scheme for determining ichthyoplankton survival is presented in Figure 3-3.

3.2 ANALYTICAL METHODOLOGY

Three calculations have been used in this study to evaluate survival of entrained organisms: initial survival, 96-hour survival, and latent survival. The proportion surviving initially and at 96 hours was determined by dividing the number of individuals classified as live and stunned by the total number of organisms initially collected (live + stunned + dead). For subsequent analysis, live and stunned organisms were grouped to avoid potential bias associated with the subjective stunned category. Since 10-15 percent of the larvae classified as stunned survived through the entire 96-hour period of observation in the present study (Subsection 4.2.2) and in previous studies (EA 1976), including them in the dead category is considered inappropriate for these analyses. Calculations of proportion surviving based on live (stunned excluded) and stunned (live excluded) have been included for completeness only.

While initial and 96-hour survival calculations are based on all organisms initially collected, latent survival at 96 hours accounts for only those organisms initially classified as live or stunned and monitored for survival during the 96-hour period subsequent to collection. Latent survival is therefore based on an initial proportion surviving of 1.0.

Comparisons of the proportion surviving were made by means of a z-test (for comparison of two proportions; [Ostle and Mensing 1975]) where,

$$z = \frac{P_I - P_D}{\left[\frac{P_I(1-P_I)}{n_I} + \frac{P_D(1-P_D)}{n_D}\right]^{\frac{1}{2}}}$$

and

P_I = proportion surviving at the intake
P_D = proportion surviving at the discharge
n = the number of organisms collected at the intake (I) or discharge (D).

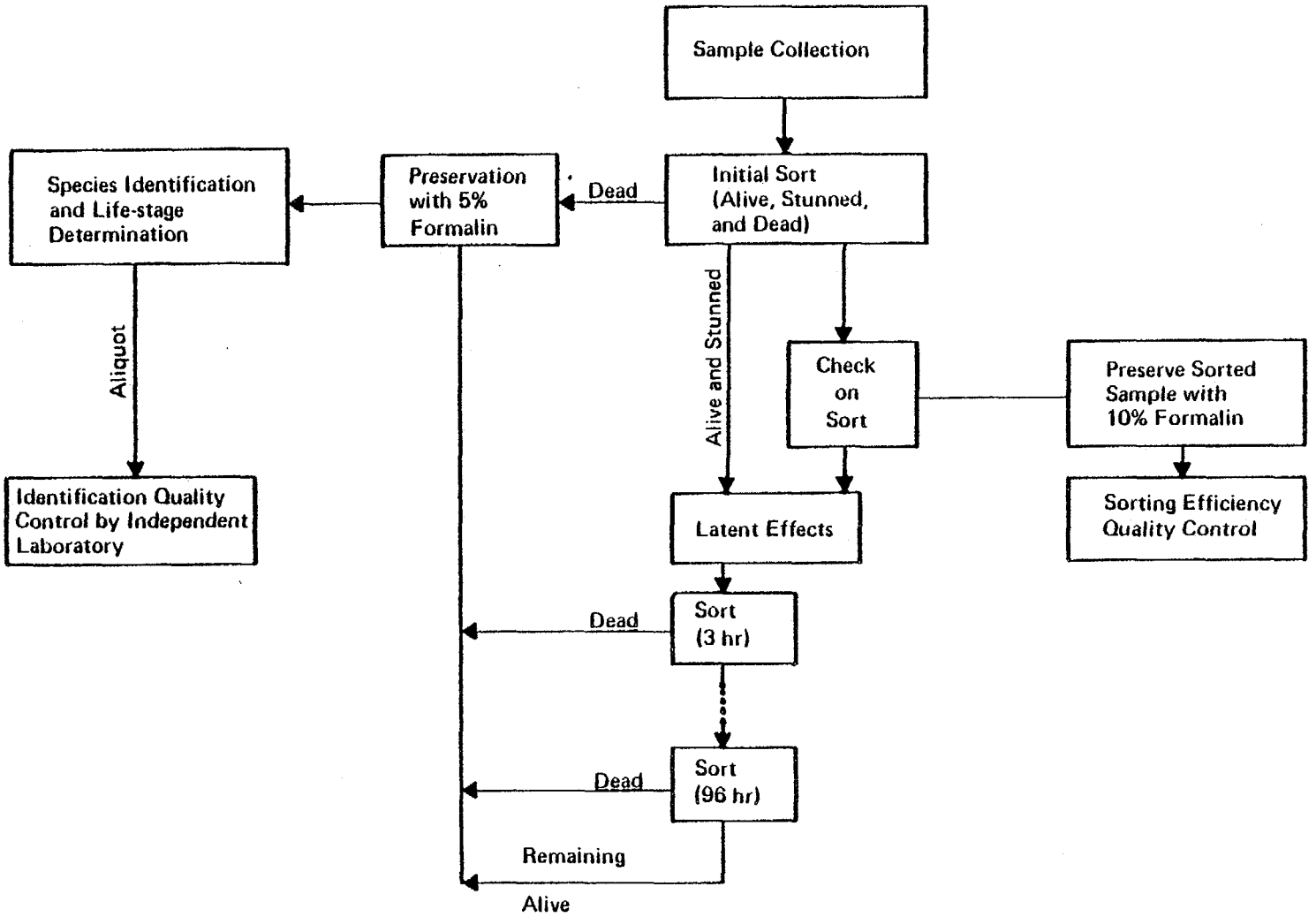


Figure 3-3. Work flow diagram of ichthyoplankton survival determination.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 NUMBERS, SEASONAL DISTRIBUTION, AND LENGTH FREQUENCY OF ORGANISMS COLLECTED

The total number of organisms collected for survival analysis in 1977 is presented by species and life stage in Table 4-1. For convenience, a list of common and scientific names has been included (Table 4-2). Striped bass, white perch, and bay anchovy were the most abundant taxa. Post-yolk-sac larvae were caught in larger numbers than the other life stages for all species.

The seasonal distribution of the five most abundant species collected for survival analysis is displayed in Figure 4-1 with mean intake and discharge water temperature. Ambient water temperature, dissolved oxygen, and pH measured at the Lovett plant intake during the entrainment survival sampling season are presented in Table 4-3. The seasonal trend in water conductivity (µmho) measured at the intake reflects the location of the Lovett plant in the transition zone of the estuary where freshwater and saltwater mix (Figure 4-2).

Members of the clupeid family (alewife and blueback herring) spawn primarily in the freshwater regions of the Hudson River north of the Lovett plant site and are therefore not highly susceptible to entrainment at the Lovett plant. This results in the low numbers collected in survival samples in 1977 and 1976.

Striped bass and white perch were collected concurrently with the clupeids. Peak numbers of these two species appeared in survival collections during the first half of June, when the ambient water temperature was 19-21 C and discharge temperatures ranged from 20 to 27 C. This compares closely with the temporal occurrence of striped bass and white perch in 1975 but is somewhat earlier than the peak occurrence in 1976. Juvenile striped bass and white perch were collected in late June 1977, when ambient temperatures ranged from 23 to 25 C and discharge temperatures did not exceed 28 C.

Bay anchovy spawn throughout the summer months in the more saline regions of the estuary. Most bay anchovy were collected in survival samples from late June to early July. This pattern of occurrence was similar to 1975. Peak numbers of this species, like those of striped bass and white perch, did not occur until later during the 1976 sampling season. During this period intake temperature was 20-26 C and discharge temperature ranged from 25 to 34 C (maximum temperature, 34 C, occurred on 5 July only).

The length-frequency distributions for the four major taxa collected at the Lovett plant intake and discharge during survival studies are presented by sampling week in Tables 4-4 through 4-7. The lengths of the fishes collected ranged from 4.0 mm to 26.0 mm, but the majority of specimens were in the 6.0 mm to 18.0 mm range. Weekly mean lengths for each species generally differed by less than 1-2 mm between intake and discharge stations during periods of peak abundance.

TABLE 4-1 TOTAL NUMBER OF EACH TAXON AND LIFE STAGE COLLECTED FOR SURVIVAL DETERMINATIONS AT THE LOVETT PLANT, 1977

Taxon	Intake			Discharge			Total		
	Larvae			Larvae			Larvae		
	Yolk-sac	Post-yolk-sac	Juveniles	Yolk-sac	Post-yolk-sac	Juveniles	Yolk-sac	Post-yolk-sac	Juveniles
Striped bass	3	96	20	4	116	4	7	212	24
White perch	0	19	11	0	34	2	0	53	0
Clupeids	0	2	0	0	8	0	0	10	0
Bay anchovy	0	33	0	0	19	0	0	52	13
Menidia spp.	0	2	0	0	1	0	0	3	0
American eel	0	0	0	0	0	1	0	0	1
Winter flounder	0	0	0	0	1	0	0	1	0
Rainbow smelt	0	0	0	0	1	0	0	1	0
Yellow perch	0	1	0	0	0	0	0	1	0

TABLE 4-2 TAXA NOMENCLATURE

Family	Genus and Species	Accepted Common Name
Anguillidae	*Anguilla rostrata*	American eel
Clupeidae	*Alosa aestivalis*	Blueback herring
	Alosa pseudoharengus	Alewife
Engraulidae	*Anchoa mitchilli*	Bay anchovy
Osmeridae	*Osmerus mordax*	Rainbow smelt
Percichthyidae	*Morone* spp.	Temperate bass
	Morone americana	White perch
	Morone saxatilis	Striped bass
Percidae	*Perca flavescens*	Yellow perch
Pleuronectidae	*Pseudopleuronectes americanus*	Winter flounder

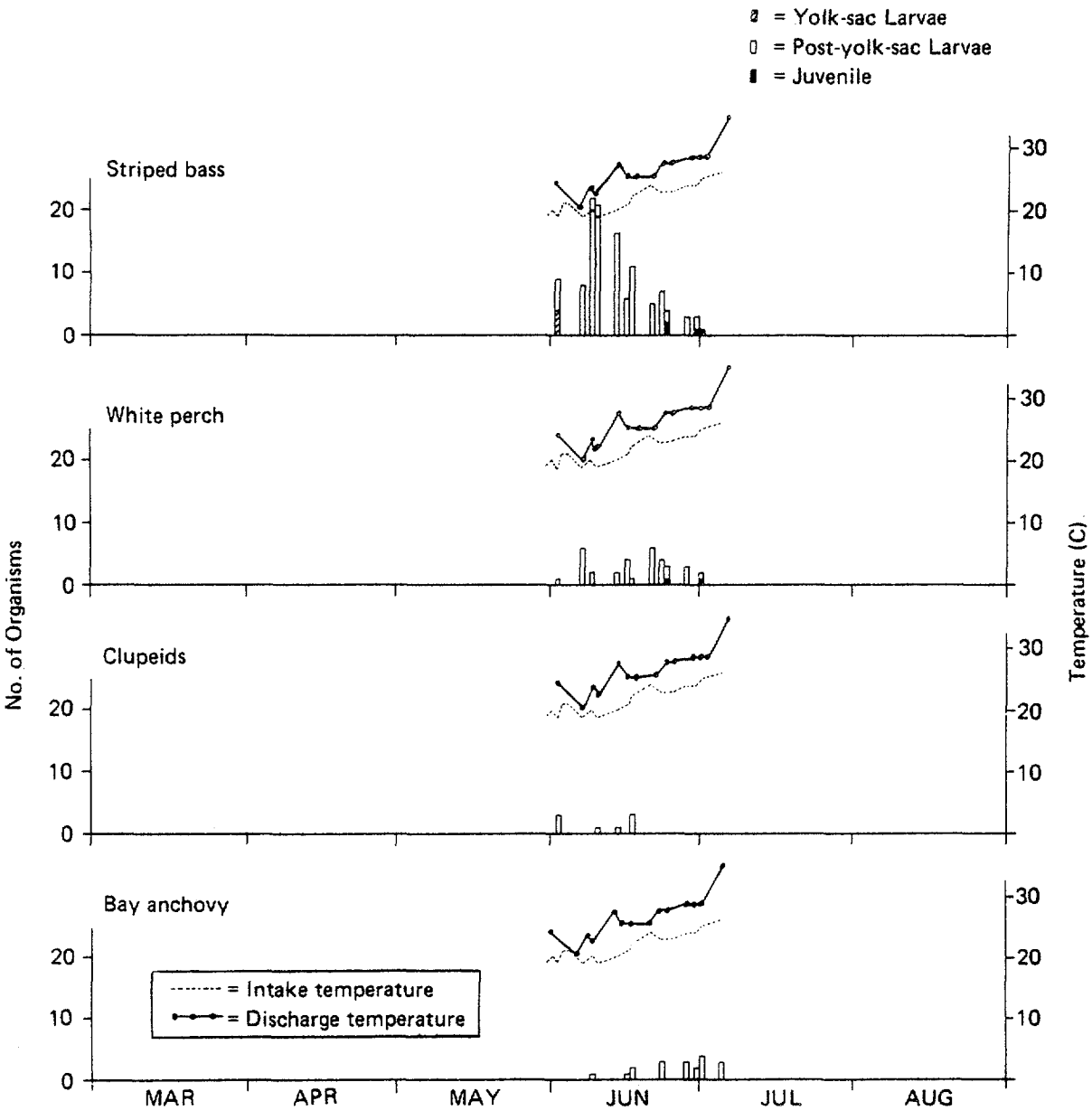


Figure 4-1. Seasonal distribution of ichthyoplankton collected for survival analysis at the Lovett plant in 1977.

TABLE 4-3 DAILY AMBIENT WATER TEMPERATURE, DISSOLVED OXYGEN, AND pH MEASURED AT THE LOVETT PLANT INTAKE, 1977

Date	Temperature	Dissolved Oxygen (mg/liter)	pH
31 MAY	19.0	--	--
01 JUN	20.0	--	--
02 JUN	20.5	--	--
07 JUN	19.4	--	--
10 JUN	19.2	13.4	7.4
14 JUN	20.0	7.3	7.2
16 JUN	21.3	6.5	7.5
17 JUN	21.5	6.9	7.2
21 JUN	23.5	6.7	7.8
23 JUN	23.3	7.0	7.5
24 JUN	23.4	7.1	8.0
28 JUN	23.8	7.3	7.3
30 JUN	24.2	--	7.4
01 JUL	24.6	--	7.5
05 JUL	26.4	--	7.2

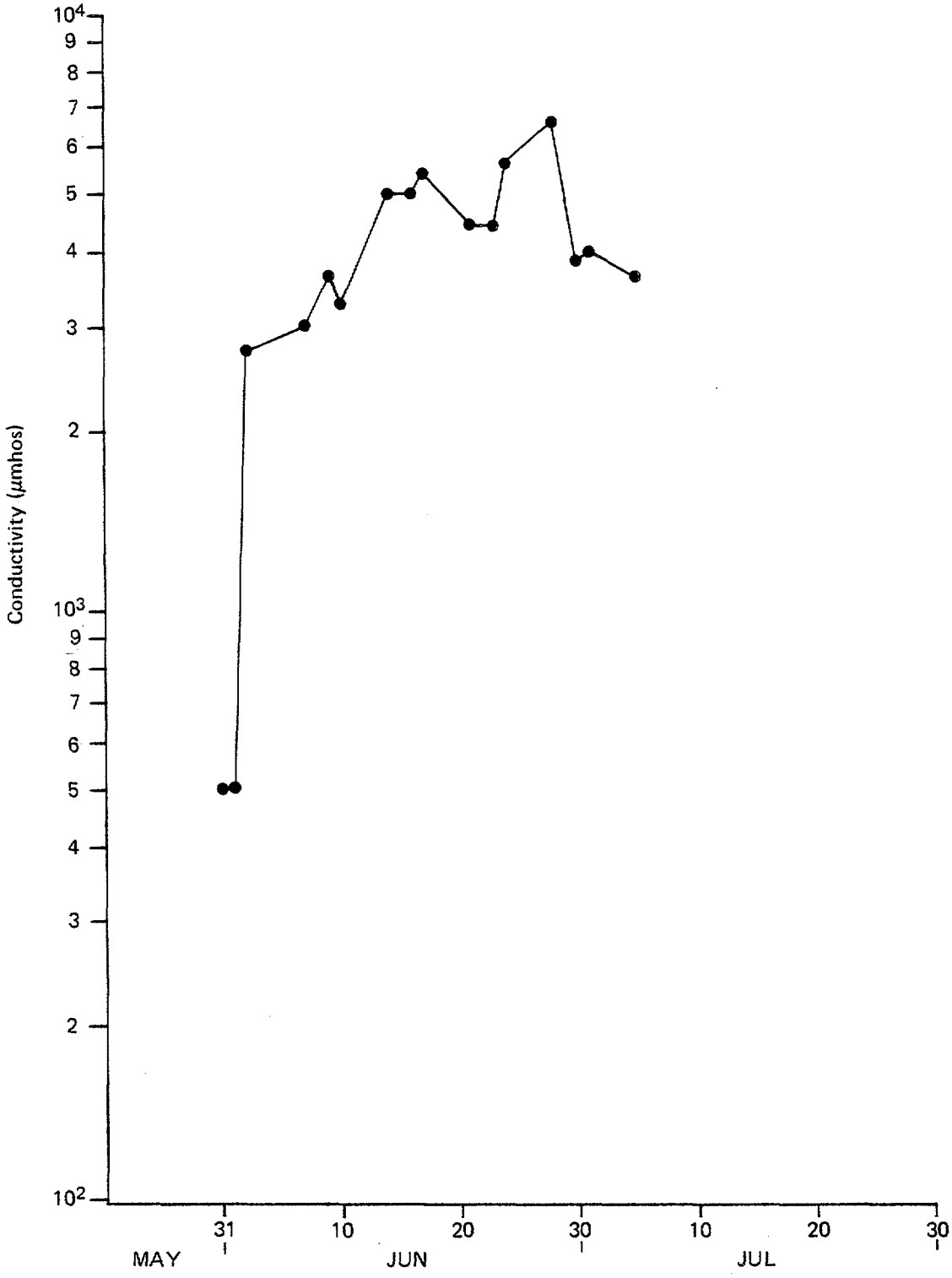


Figure 4-2. Mean daily conductivity (μmhos) measured at the Lovett plant intake, 1977.

TABLE 4-4 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF STRIPED BASS COLLECTED AT THE LOVETT PLANT INTAKE AND DISCHARGE, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	5	8.0	1.8	0	0	3	2	0	0	0	0	0	6.0	7.0	11.0
11 JUN 77	47	9.5	2.3	0	0	18	18	11	0	0	0	0	6.0	10.0	14.0
18 JUN 77	39	11.6	2.3	0	0	4	17	14	4	0	0	0	6.0	11.0	17.0
25 JUN 77	3	8.3	1.2	0	0	2	1	0	0	0	0	0	7.0	8.0	10.0
2 JUL 77	11	18.4	3.1	0	0	0	0	1	4	3	3	0	14.0	18.0	23.0
5 JUL 77	1	26.0	0.0	0	0	0	0.	0	0	0	0	1	26.0	26.0	26.0

Discharge

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	12	8.0	1.4	0	0	7	5	0	0	0	0	0	6.0	8.0	10.0
11 JUN 77	50	9.3	2.7	0	1	20	20	6	3	0	0	0	5.0	9.0	16.0
18 JUN 77	38	12.1	2.1	0	0	2	10	22	4	0	0	0	6.0	12.0	16.0
25 JUN 77	18	12.3	3.2	0	0	2	5	7	2	2	0	0	7.0	12.0	19.0
2 JUL 77	12	15.9	3.2	0	0	0	2	1	5	3	1	0	11.0	16.0	21.0
5 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-5 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF WHITE PERCH COLLECTED AT THE LOVETT PLANT INTAKE AND DISCHARGE, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 JUN 77	8	8.5	1.4	0	0	4	4	0	0	0	0	0	6.0	8.5	10.0
18 JUN 77	3	10.7	0.9	0	0	0	2	1	0	0	0	0	10.0	10.0	12.0
25 JUN 77	3	12.7	0.5	0	0	0	0	3	0	0	0	0	12.0	13.0	13.0
2 JUL 77	5	13.6	4.1	0	0	1	0	2	1	1	0	0	6.0	14.0	18.0
5 JUL 77	1	14.0	0.0	0	0	0	0	1	0	0	0	0	14.0	14.0	14.0

Discharge

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	1	5.0	0.0	0	1	0	0	0	0	0	0	0	5.0	5.0	5.0
11 JUN 77	7	7.7	1.5	0	1	3	3	0	0	0	0	0	5.0	8.0	9.0
18 JUN 77	7	9.0	3.2	0	2	1	3	1	0	0	0	0	4.0	11.0	13.0
25 JUN 77	16	11.2	3.1	0	0	4	4	5	3	0	0	0	6.0	11.5	16.0
2 JUL 77	6	11.7	3.1	0	0	1	2	2	1	0	0	0	8.0	11.0	17.0
5 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-6 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF CLUPEIDS COLLECTED AT THE LOVETT PLANT INTAKE AND DISCHARGE, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 JUN 77	1	17.0	0.0	0	0	0	0	0	1	0	0	0	17.0	17.0	17.0
18 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
25 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUL 77	1	8.0	0.0	0	0	1	0	0	0	0	0	0	8.0	8.0	8.0
5 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Discharge

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	3	9.3	0.5	0	0	0	3	0	0	0	0	0	9.0	9.0	10.0
11 JUN 77	1	12.0	0.0	0	0	0	0	1	0	0	0	0	12.0	12.0	12.0
18 JUN 77	2	8.0	1.0	0	0	1	1	0	0	0	0	0	7.0	8.0	9.0
25 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
2 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
5 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-7 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF BAY ANCHOVY COLLECTED AT THE LOVETT PLANT INTAKE AND DISCHARGE, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 JUN 77	1	8.0	0.0	0	0	1	0	0	0	0	0	0	8.0	8.0	8.0
18 JUN 77	1	7.0	0.0	0	0	1	0	0	0	0	0	0	7.0	7.0	7.0
25 JUN 77	2	9.5	0.5	0	0	0	2	0	0	0	0	0	9.0	9.5	10.0
2 JUL 77	17	10.2	4.1	0	2	4	4	4	2	1	0	0	5.0	9.0	18.0
5 JUL 77	5	6.8	1.5	0	1	3	1	0	0	0	0	0	5.0	6.0	9.0

Discharge

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
3 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
11 JUN 77	1	5.0	0.0	0	1	0	0	0	0	0	0	0	5.0	5.0	5.0
18 JUN 77	3	6.7	2.5	0	1	1	1	0	0	0	0	0	4.0	6.0	10.0
25 JUN 77	3	9.3	2.4	0	0	1	2	0	0	0	0	0	6.0	11.0	11.0
2 JUL 77	11	11.3	4.7	0	0	5	1	1	3	1	0	0	6.0	10.0	19.0
5 JUL 77	2	12.0	6.0	0	0	1	0	0	0	1	0	0	6.0	12.0	18.0

Note: N = number of lengths; X = mean length; SD = standard deviation; Min = shortest length; Med = median length; Max = greatest length.

4.2 INTAKE AND DISCHARGE SURVIVAL

4.2.1 Initial and 96-Hour Survival

The survival of ichthyoplankton collected at the intake station in 1977 (Tables 4-8 and 4-9) was similar to that measured in 1976. Initial survival of striped bass and white perch post-yolk-sac larvae was 0.91 and 0.68, respectively, compared with 1976 values of 0.80 and 0.56. Similarly, initial survival of bay anchovy was comparable between years; 0.06 in 1977 and 0.01 in 1976. Clupeid post-yolk-sac larvae initial survival appeared to be somewhat higher in 1977 although the sample size was very small (2 clupeids in 1977 versus 1,029 in 1976).

Survival at 96 hours for samples collected at the intake in 1977 was higher than or approximately the same as that of organisms collected in 1976. Striped bass post-yolk-sac larvae 96-hour survival was 0.69 in 1977 and 0.33 in 1976. Similarly, white perch of the same life stage exhibited 96-hour survival of 0.58 in 1977 and 0.02 in 1976. These differences between years for white perch and striped bass were significant at the $\alpha = 0.05$ level (z-test for difference between two proportions). Clupeid and bay anchovy post-yolk-sac larvae exhibited similar trends. These consistent increases in 96-hour survival between sampling years probably result in part from improvements in collection and transfer procedures in 1977 and differences in the discharge temperature regime (Section 4.3).

Initial survival at the discharge was high for most species and life stages. Survival at 96 hours was high for striped bass and white perch post-yolk-sac larvae and juveniles at the discharge (0.62 and 0.47, respectively, for post-yolk-sac larvae; 1.00 for juveniles). Clupeid and bay anchovy 96-hour survival was low at the discharge (0-0.12).

4.2.2 Latent Survival

Survival of organisms initially alive (live and stunned) at the intake and discharge stations was monitored for 96 hours following sample collection. Latent survival of controls (intake) was high for all taxa collected, with the exception of bay anchovy (Table 4-10). No bay anchovy collected at the intake were alive at the 3-hour observation. Latent survival at the intake was considerably higher in 1977 than in 1976. Latent survival at 96 hours (based on an initial survival of 1.0) at the intake was 0.76 and 0.85 for striped bass and white perch post-yolk-sac larvae, respectively. All clupeid controls that were alive initially survived through 96 hours.

Statistical confidence for the comparison of latent effects between intake and discharge was highest for striped bass post-yolk-sac larvae since large numbers of these organisms were available for latent effects observations (Table 4-10). Latent survival curves were very similar at the intake and discharge stations. The survival curves decreased during the first 12 hours following collection, then leveled off at a relatively high level (greater than

TABLE 4-8 MEAN INITIAL AND 96-HOUR SURVIVAL OF EACH TAXON AND LIFE STAGE COLLECTED AT THE LOVETT PLANT IN 1977

Taxon	Station	Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
		No. of Fish	Proportion Live[a] Initial	96-hr	No. of Fish	Proportion Live Initial	96-hr	No. of Fish	Proportion Live Initial	96-hr
Striped bass	I	3	0.67±0.27[b]	0.67±0.27	96	0.91±0.03	0.69±0.05	20	1.00	0.55±0.11
	D	4	0.25±0.25	0.00	116	0.82±0.04	0.62±0.05	4	1.00	1.00
White perch	I	0	--	--	19	0.68±0.11	0.58±0.11	11	1.00	0.18±0.12
	D	0	--	--	34	0.76±0.07	0.47±0.09	2	1.00	1.00
Bay anchovy	I	0	--	--	33	0.06±0.04	0.00	0	--	--
	D	0	--	--	19	0.16±0.08	0.00	0	--	--
Clupeids	I	0	--	--	2	1.00	1.00	0	--	--
	D	0	--	--	8	0.50±0.18	0.12±0.12	0	--	--
Yellow perch	I	0	--	--	1	1.00	0.00	0	--	--
	D	0	--	--	0	--	--	0	--	--
Winter flounder	I	0	--	--	0	--	--	0	--	--
	D	0	--	--	1	1.00	1.00	0	--	--
Rainbow smelt	I	0	--	--	0	--	--	0	--	--
	D	0	--	--	0	--	--	1	1.00	1.00
American eel	I	0	--	--	0	--	--	0	--	--
	D	0	--	--	0	--	--	1	1.00	1.00
Menidia spp.	I	0	--	--	2	0.50±0.35	0.00	0	--	--
	D	0	--	--	1	0.00	--	0	--	--

(a) Proportion alive = (No. live + No. stunned)/(No. live + No. stunned + No. dead).
(b) ± 1 standard error.

TABLE 4-9 MEAN INITIAL AND 96-HOUR SURVIVAL[a] OF THE FOUR MOST ABUNDANT TAXA COLLECTED AT THE LOVETT PLANT IN 1977, BY LIFE STAGE

		Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
			Proportion Live[b]			Proportion Live			Proportion Live	
Taxon	Station	No. of Fish	Initial	96-hr	No. of Fish	Initial	96-hr	No. of Fish	Initial	96-hr
Striped bass	I	3	0.67±0.27[c]	0.67±0.27	96	0.84±0.04	0.66±0.05	20	1.00	0.55±0.11
	D	4	0.25±0.21	0.00	116	0.71±0.04	0.58±0.05	4	1.00	1.00
White perch	I	0	--	--	19	0.63±0.11	0.58±0.11	11	1.00	0.18±0.12
	D	0	--	--	34	0.71±0.08	0.47±0.09	2	1.00	1.00
Clupeids	I	0	--	--	2	1.00	1.00	0	--	--
	D	0	--	--	8	0.12±0.12	0.12±0.12	0	--	--
Bay anchovy	I	0	--	--	33	0.00	--	0	--	--
	D	0	--	--	19	0.00	--	0	--	--

(a) Survival based on proportion live excluding stunned.
(b) Proportion alive = (No. live)/(No. live + No. stunned + No. dead).
(c) ± 1 standard error.

TABLE 4-10 LATENT SURVIVAL OF LARVAL AND JUVENILE FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE LOVETT PLANT, 1977

Taxon	Life Stage	Station	No. of Organisms[c]	Time Since Collection (hr) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	87	1.00	1.00[b]	0.98±0.02	0.98±0.02[b]	0.95±0.02	0.90±0.03	0.85±0.04	0.76±0.05
		D	95	1.00	0.95±0.02[a]	0.92±0.03	0.88±0.03	0.88±0.03	0.85±0.04	0.83±0.04	0.76±0.04
	Juveniles	I	20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.55±0.11
		D	4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
White perch	Larvae	I	13	1.00	0.93±0.07	0.85±0.10	0.85±0.10	0.85±0.10	0.85±0.10	0.85±0.10	0.85±0.10
		D	26	1.00	0.93±0.05	0.82±0.08	0.74±0.09	0.74±0.09	0.70±0.09	0.70±0.09	0.62±0.10
	Juveniles	I	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.18±0.12
		D	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Clupeids	Larvae	I	2	1.00	1.00[b]	1.00[b]	1.00[b]	1.00[b]	1.00[b]	1.00[b]	1.00[b]
		D	4	1.00	0.50±0.25	0.50±0.25	0.24±0.21	0.24±0.21	0.24±0.21	0.24±0.21	0.24±0.21
Bay anchovy	Larvae	I	2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		D	3	1.00	0.69±0.27	0.69±0.27	0.31±0.27	0.31±0.27	0.31±0.27	0.31±0.27	0.00

(a) ± 1 standard error.
(b) Discharge survival was significantly lower than at the intake for a one-sided test of the difference in two proportions at the $\alpha = 0.05$ level (z-test).
(c) Number of fish alive (live + stunned) at 0 hours.

80 percent), with the intake generally less than 5 percent higher than the discharge (Figure 4-3). Significant differences were observed only at the 3- and 12-hour observations. White perch post-yolk-sac larvae displayed a similar pattern of survival with a slightly lower (70 percent) level of latent survival (Figure 4-4). These trends in survival of Morone larvae are similar to those observed at the Bowline Point Generating Station during 1977 (EA 1978a).

Latent survival of Morone juveniles collected at the discharge was not significantly lower than those collected at the intake. Discharge survival curves for both white perch and striped bass juveniles remained stable at 100 percent through 72 hours at the intake and through 96 hours at the discharge (Figure 4-5). There was no significant difference in survival between the intake and discharge.

Survival of clupeid and bay anchovy larvae collected at the discharge followed a similar trend although survival stabilized at lower levels, 0.24 and 0.31, respectively. Clupeid survival was consistent with survival observed during 1976 at the Lovett plant and similar to that observed at the Bowline Point Generating Station in 1977 (EA 1977, 1978a).

Latent survival of organisms initially classified as live (stunned excluded) is presented in Table 4-11. Survival of organisms collected at the discharge generally was not significantly different than that of individuals collected at the intake using this method of analysis. Significant differences between intake and discharge survival (Table 4-10) can be attributed to latent mortality of stunned organisms at both stations (Table 4-12). Although latent survival of the stunned individuals was somewhat lower than that of the live organisms, the inclusion of stunned organisms in the entrainment survival analysis does not significantly alter the comparability of latent survival at the intake and discharge stations. Since the stunned classification is a subjective category and, moreover, since many stunned organisms survive through the 96-hour latent effects observation period (Table 4-12), calculations of entrainment survival (Section 4.5) have been made on the "live" and "stunned" data combined.

4.3 THERMAL EFFECT ON SURVIVAL

Thermal exposure did not appear to significantly reduce observed survival at the Lovett plant discharge (Table 4-13). The majority of all discharge collections occurred at less than 30.0 C which may partially account for differences in survival compared with 1976 when a relatively high percentage of white perch (50 percent) and striped bass (40 percent) post-yolk-sac larvae were collected above 30.0 C. Ecological Analysts (1978a, 1978b) demonstrated no relationship between survival and temperatures below 30.0-33.0 C in laboratory and entrainment studies conducted at the Bowline Point Generating Station.

Initial survival of ichthyoplankton that were collected when total discharge temperature was below 30.0 C was generally higher than that observed in 1976 for the same temperature interval (19.0-29.9 C). Survival of striped bass and white perch post-yolk-sac larvae was 0.82 and 0.76, respectively, compared

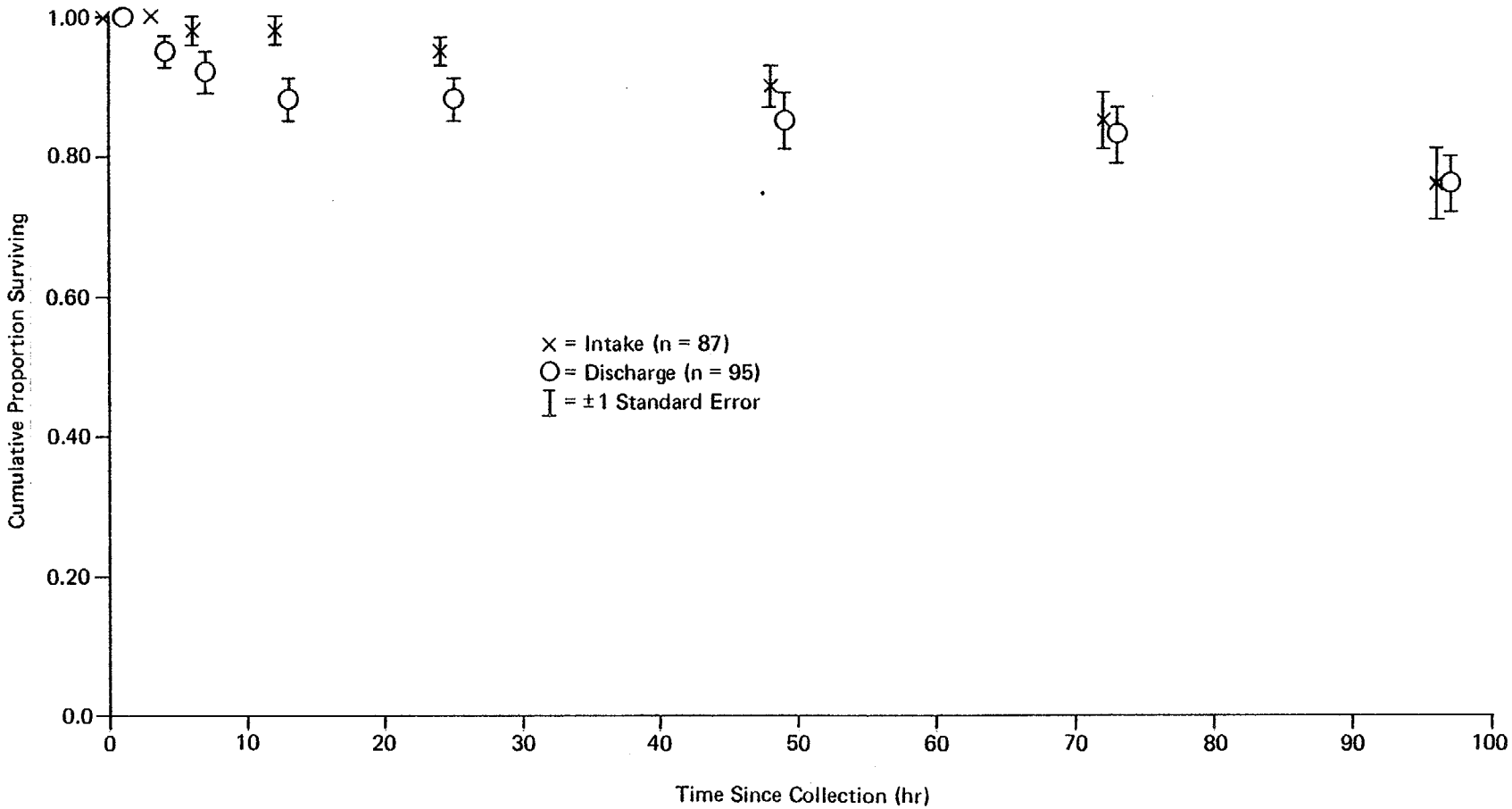


Figure 4-3. Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Lovett plant, 1977.

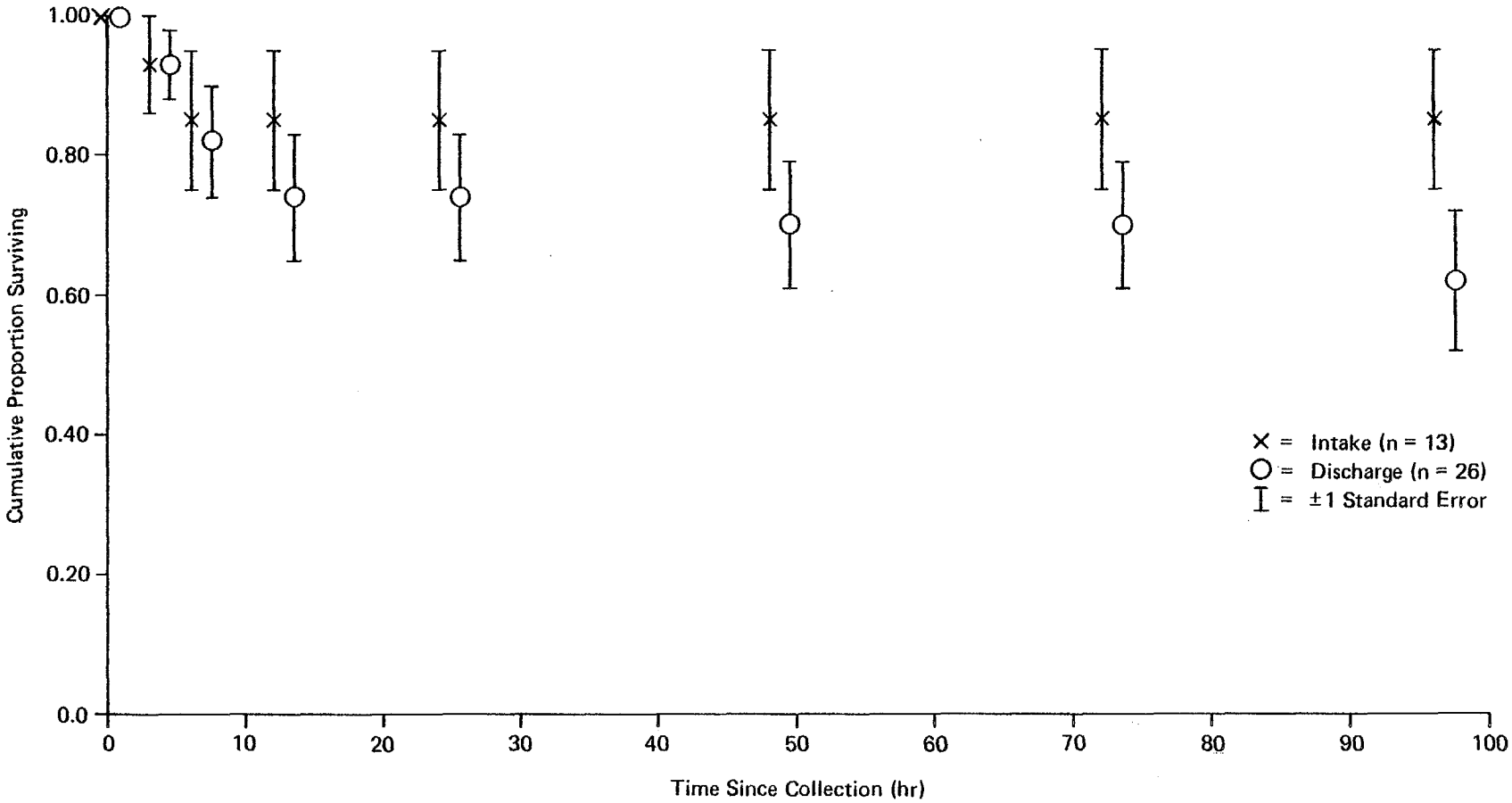


Figure 4-4. Latent survival of white perch post-yolk-sac larvae collected at the intake and discharge of the Lovett plant, 1977.

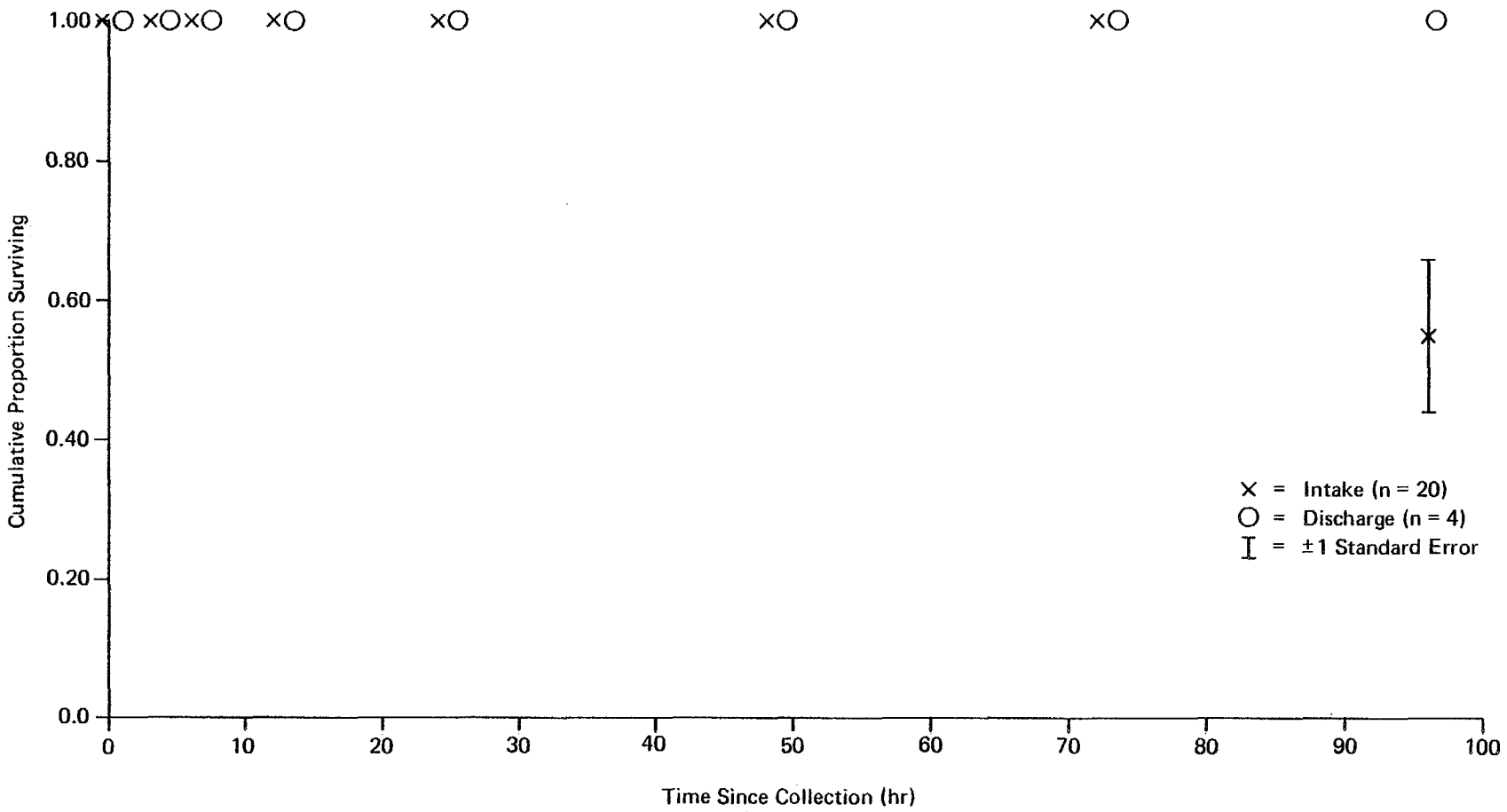


Figure 4-5. Latent survival of striped bass juveniles collected at the intake and discharge of the Lovett plant, 1977.

TABLE 4-11 LATENT SURVIVAL OF LIVE[a] LARVAL AND JUVENILE FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE LOVETT PLANT, 1977

Taxa	Life Stage	Station	No. of Organisms	Time Since Collection (hr) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	81	1.00	1.00	1.00	1.00	0.99±0.01	0.94±0.03	0.88±0.04	0.79±0.05
		D	82	1.00	0.99±0.02[b]	0.97±0.02	0.96±0.03	0.94±0.03	0.93±0.03	0.90±0.04	0.82±0.05
	Juveniles	I	20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.55±0.11
		D	4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
White perch	Larvae	I	12	1.00	0.92±0.10	0.92±0.10	0.92±0.10	0.92±0.10	0.92±0.10	0.92±0.10	0.92±0.10
		D	24	1.00	0.96±0.05	0.83±0.09	0.75±0.11	0.75±0.11	0.70±0.11	0.70±0.11	0.66±0.11
	Juveniles	I	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.18±0.12
		D	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Clupeids	Larvae	I	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		D	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

(a) Stunned excluded.
(b) Indicates ± one standard error.

TABLE 4-12 LATENT SURVIVAL OF STUNNED LARVAL FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE LOVETT PLANT, 1977

Taxon	Life Stage	Station	No. of Organisms	Time Since Collection (hr) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	6	1.00	1.00	0.67±0.19[a]	0.67±0.19	0.50±0.20	0.50±0.20	0.50±0.20	0.50±0.20
		D	12	1.00	0.75±0.12	0.58±0.14	0.42±0.14	0.42±0.14	0.42±0.14	0.42±0.14	0.42±0.14
White perch	Larvae	I	1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
		D	2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clupeids	Larvae	I	0	--							
		D	3	1.00	0.33±0.27	0.33±0.27	0.00	0.00	0.00	0.00	0.00
Bay anchovy	Larvae	I	2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		D	3	1.00	0.67±0.27	0.67±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.00

(a) ±1 standard error.

TABLE 4-13 SURVIVAL OF ICHTHYOPLANKTON AT THE INTAKE (I) AND DISCHARGE (D) OF THE LOVETT PLANT AS A FUNCTION OF DISCHARGE TEMPERATURE, 1977

Taxon	Station	Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
		Temperature (C)	No. of Fish	P_s(a)	Temperature (C)	No. of Fish	P_s	Temperature (C)	No. of Fish	P_s
Striped bass	I		3	0.67		96	0.91		3	0.67
	D	19.0-29.9	4	0.50	19.0-29.9	116	0.82	19.0-29.9	4	1.00
	D	30.0-32.9	0	--	30.0-32.9	0	--	30.0-32.9	0	--
	D	33.0-35.9	0	--	33.0-35.9	0	--	33.0-35.9	0	--
White perch	I		0	--		19	0.68		11	1.00
	D	19.0-29.9	0	--	19.0-29.9	34	0.76	19.0-29.9	2	1.00
	D	30.0-32.9	0	--	30.0-32.9	0	--	30.0-32.9	0	--
	D	33.0-35.9	0	--	33.0-35.9	0	--	33.0-35.9	0	--
Clupeids	I		0	--		2	1.00		0	--
	D	19.0-29.9	0	--	19.0-29.9	8	0.50	19.0-29.9	0	--
	D	30.0-32.9	0	--	30.0-32.9	0	--	30.0-32.9	0	--
	D	33.0-35.9	0	--	33.0-35.9	0	--	33.0-35.9	0	--
Bay anchovy	I		0	--		33	0.06		0	--
	D	19.0-29.9	0	--	19.0-29.9	16	0.19	19.0-29.9	0	--
	D	30.0-32.9	0	--	30.0-32.9	0	--	30.1-32.9	0	--
	D	33.0-35.9	0	--	32.0-35.9	3	0.00	33.0-35.9	0	--

(a) P_s = initial proportion surviving; (No. live + No. stunned)/(No. live + No. stunned + No. dead).

with 1976 values of 0.53 (n = 87) and 0.28 (n = 39). Striped bass yolk-sac larvae survival, on the other hand, was 0.92 (n = 13) for the same temperature grouping in 1976 (1977: 0.50, n = 4). Post-yolk-sac survival of clupeids was 0.50 in 1977 (1976: 0.24, n = 34). These differences may have been related to improvements in collection and transport procedures between the 2 years.

4.4 LENGTH ANALYSIS OF STRIPED BASS SURVIVAL

The possible dependence of survival of striped bass on organism size was investigated during the 1977 season at the Lovett plant. The length of larvae and juveniles was measured to the nearest 1.0 mm and survival at intake and discharge calculated for each 3.0-mm length interval. Initial survival at the intake increased slightly with size between 3.0 and 17.9 mm, and ranged from 0.81 to 1.0 (Table 4-14). Control survival for lengths above 18.0 mm was 100 percent based on a total of seven striped bass, all of which were juveniles. Discharge survival for most length intervals ranged between 0.76 and 1.0, with no apparent relationship to length.

Latent survival was high for all length groups, with no significant difference between intake and discharge (Table 4-15) except for the 9.0-11.9 mm interval from 6 to 48 hours. Survival was consistent among all length intervals for the first 24 hours following collection, but survival from 48 to 96 hours was highest for the larger fish (>12 mm) and lowest for fish under 12.0 mm in length. The similarity in the shapes of the intake and discharge latent survival curves (Figure 4-6) indicates that most of the observed latent mortality was due to stress experienced during collection and holding. The results also show that latent mortality of younger fish (those in the 6.0-11.9 mm size range) tends to be more rapid during the first 24 hours after collection followed by a slower rate of mortality over the remainder of the holding period. Larger fish tended to be more resistant to sampling stresses, showing decreases in survival primarily during the first 3-6 hours of holding with relatively stable survival thereafter. These results are comparable with those observed at the Bowline Point plant during the same period.

4.5 ENTRAINMENT SURVIVAL

The effect of the Lovett plant on survival of ichthyoplankton was estimated through comparison of intake and discharge results. Intake survival was used as a control because organisms collected in intake samples were not subjected to the plant, although they did experience the same handling and sampling stresses as the discharge collections. Differences between intake and discharge survival were tested for significance (one-tailed z-test, $\alpha = 0.05$), and entrainment survival was calculated with the equation:

$$S_e(\%) = P_D/P_I \times 100$$

where

P_I = proportion surviving at the intake
P_D = proportion surviving at the discharge.

TABLE 4-14 INITIAL SURVIVAL OF STRIPED BASS COLLECTED AT THE LOVETT PLANT INTAKE (I) AND DISCHARGE (D) AS A FUNCTION OF LIFE STAGE AND SPECIES LENGTH (mm), 1977

		Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
Length (mm)	Station	No. of Fish Measured	P_s(a)	No. of Fish Measured	P_s	No. of Fish Measured	P_s
0.0 - 2.9	I	0	--	0	--	0	--
	D	0	--	0	--	0	--
3.0 - 5.9	I	0	--	0	--	0	--
	D			1	1.00	0	--
6.0 - 8.9	I	3	0.67±0.27(b)	26	0.81±0.08	0	--
	D	4	0.50±0.25	27	0.89±0.06	0	--
9.0 - 11.9	I	0	--	38	0.92±0.04	0	--
	D	0	--	42	0.79±0.06	0	--
12.0 - 14.9	I	0	--	25	0.96±0.04	0	--
	D	0	--	29	0.76±0.08	0	--
15.0 - 17.9	I	0	--	4	1.00	4	1.00
	D	0	--	9	0.89±0.10	0	--
18.0 - 20.9	I	0	--	0	--	3	1.00
	D	0	--	1	1.00	4	1.00
21.0 - 23.9	I	0	--	0	--	3	1.00
	D	0	--	0	--	0	--
24.0+	I	0	--	0	--	1	1.00
	D	0	--	0	--	0	--

(a) P_s = initial proportion surviving: (No. live + No. stunned)/(No. live + No. stunned + No. dead).
(b) ± 1 standard error.

TABLE 4-15 LATENT SURVIVAL OF STRIPED BASS COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) OF THE LOVETT PLANT AS A FUNCTION OF LENGTH (ALL LIFE STAGES COMBINED), 1977

Length (mm)	Station	No. of Alive Fish Measured	Time Since Collection (hr) 0	3	6	12	24	48	72	96
3.0 - 5.9	I	0	--	--	--	--	--	--	--	--
	D	1	1.00	1.00	1.00	0.00	--	--	--	--
6.0 - 8.9	I	23	1.00	0.96±0.04(a)	0.92±0.05	0.88±0.06	0.88±0.06	0.88±0.06	0.85±0.07	0.75±0.08
	D	26	1.00	1.00	0.95±0.05	0.95±0.05	0.86±0.07	0.79±0.08	0.74±0.09	0.56±0.10
9.0 - 11.9	I	35	1.00	1.00	1.00*	1.00*	1.00*	0.95±0.04*	0.86±0.06	0.77±0.07
	D	33	1.00	0.94±0.04	0.87±0.06	0.81±0.07	0.78±0.07	0.76±0.07	0.76±0.07	0.70±0.08
12.0 - 14.9	I	24	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96±0.04
	D	22	1.00	0.95±0.05	0.91±0.06	0.91±0.06	0.91±0.06	0.91±0.06	0.91±0.06	0.87±0.07
15.0 - 17.9	I	8	1.00	1.00	0.88±0.11	0.88±0.11	0.88±0.11	0.88±0.11	0.88±0.11	0.88±0.11
	D	8	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18.0 - 20.9	I	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	5	1.00	0.80±0.18	0.80±0.18	0.80±0.18	0.80±0.18	0.80±0.18	0.80±0.18	0.80±0.18
21.0 - 23.9	I	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	0	--	--	--	--	--	--	--	--
24.0+	I	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	0	--	--	--	--	--	--	--	--

(a) ±1 standard error.

Note: * discharge survival significantly lower than that of the intake for a one-sided test of the difference between proportions, $\alpha = 0.05$.

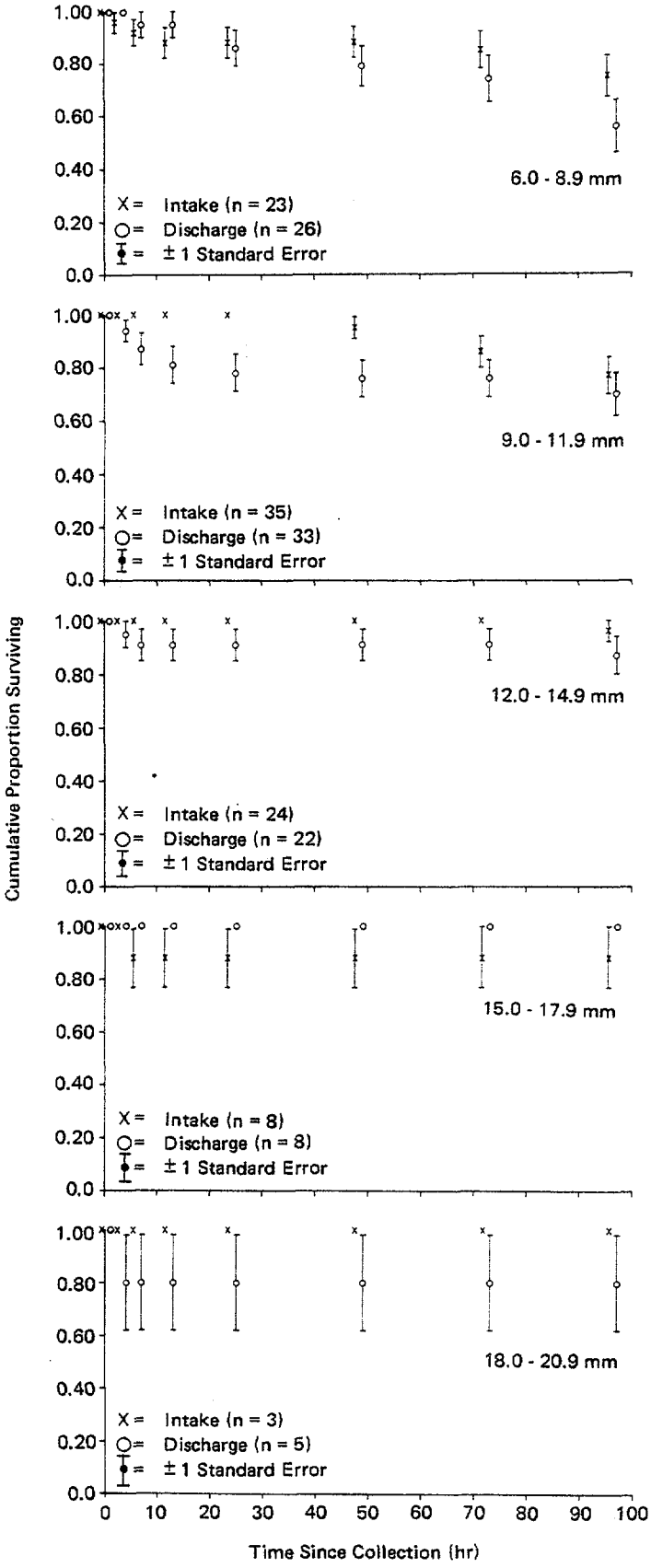


Figure 4-6. Latent survival by length interval of striped bass collected at the Lovett plant, 1977.

In order to assure a representative sample, entrainment survival was estimated for each species and life stage for which at least five organisms were collected at both the intake and discharge stations. Initial survival data were used for striped bass and white perch. Estimates of entrainment survival were not made for bay anchovy larvae.

Entrainment survival for Morone was generally high when total temperature of the discharge water was less than 30 C (Table 4-16). Survival of striped bass post-yolk-sac larvae at temperatures below 30 C was 66 and 90 percent in 1976 and 1977, respectively. The sample size was too small in 1977 to estimate yolk-sac larvae survival; however, data obtained in 1976 indicated that 100 percent of this species and life stage survived entrainment (Table 4-17). The total discharge temperature in 1977 did not exceed 30 C during the entrainment season of Morone. The 1976 data, however, indicate that from 50 to 54 percent of striped bass survived discharge temperatures exceeding 30 C. White perch survival in 1977 (100 percent) was higher than in 1976 (47 percent) for discharge temperatures below 30 C.

No significant difference was found between intake and discharge survival below 30 C for Morone post-yolk-sac larvae. The sample size was not large enough to estimate survival for clupeid post-yolk-sac larvae in 1977. Survival estimates obtained in 1976 indicated that 57 percent of this species survived at discharge temperatures below 30 C, but survival decreased to 21 percent when temperatures ranged from 30 to 32.9 C, and declined further to 12 percent for discharge temperatures greater than 33 C.

Entrainment survival of all life stages of striped bass, white perch, Atlantic tomcod, and clupeids at exposure temperatures below thermal tolerance limits of the species has been consistently high in studies conducted at the Lovett plant during 1976 and 1977 (Table 4-17). Moreover, it appears both from the field studies and laboratory thermal effects studies (EA 1978b) that the thermal tolerance of these species is not likely to be exceeded under normal plant operation with the possible exception of the small portion of entrainment occurring in July.

TABLE 4-16 ENTRAINMENT SURVIVAL OF ICHTHYOPLANKTON AT THE LOVETT PLANT, 1977

	Yolk-Sac-Larvae		Post-Yolk-Sac-Larvae		Juveniles	
Taxon	Temperature (C)	Se (%)[a]	Temperature (C)	Se (%)	Temperature (C)	Se (%)
Striped Bass	19.0-29.9	--[b]	19.0-29.9	90(NS)[c]	19.0-29.9	--
	30.0-32.9	--	30.0-32.9	--	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	--	33.0-34.9	--
White perch	19.0-29.9	--	19.0-29.9	100(NS)	19.0-29.9	--
	30.0-32.9	--	30.0-32.9	--	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	--	33.0-35.9	--
Clupeids	19.0-29.9	--	19.0-29.9	--	19.0-29.9	--
	30.0-32.9	--	30.0-32.9	--	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	--	33.0-35.9	--
Bay anchovy	19.0-29.9	--	19.0-29.9	NE[d]	19.0-29.9	--
	30.0-32.9	--	30.0-32.9	--	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	--	33.0-35.9	--

(a) Se (%) indicates percent survival.
(b) Dashes indicate sample size at intake or discharge less than five.
(c) NS indicates discharge survival not significantly lower than that at the intake for a one-tailed z-test at the $\alpha = 0.05$ level.
(d) NE indicates that no estimate was made for reasons described in the text.

TABLE 4-17 ENTRAINMENT SURVIVAL FROM NONTHERMAL[a] EFFECTS AT THE LOVETT PLANT, 1976-1977

		1976			1977			Combined		
Species	Life Stage	N_I	N_D	Se(%)	N_I	N_D	Se(%)	N_I	N_D	Se(%)
Striped bass	Yolk-sac	25	14	100	3	4		28	18	99
	Post-yolk-sac	101	144	66	96	116	84	197	260	99
	Juvenile	--	--	--	20	4		20	4	100
White perch	Yolk-sac	--	--	--	--	--	--	--	--	--
	Post-yolk-sac	39	80	47	19	34	--	58	111	42
	Juvenile	--	--	--	11	2	--	11	2	100
Clupeids	Yolk-sac	--	--	--	--	--	--	--	--	--
	Post-yolk-sac	65	88	57	2	8	--	67	96	31
	Juvenile	1	2	--	--	--	--	1	2	--
Bay anchovy	Yolk-sac	8	46	--	--	--	--	8	46	--
	Post-yolk-sac	1,029	1,765	--	33	19	--	1,062	1,784	--
	Juvenile	--	1	--	--	--	--	--	1	--

(a) Observed survival is presented for organisms captured at discharge temperatures less than 33.0 C for Morone juveniles and 30 C for all other taxa.

Note: N_I = number collected at the intake; N_D = number collected at the discharge; Se(%) = entrainment survival.

REFERENCES

Bath, D. 1974. New York University egg and larval seminar. Unpublished.

Bayless, J. D. 1972. Artificial propogation and hybridization of striped bass, Morone saxatilis (Walbaum). South Carolina Wildlife Resources Dept.

Bigelow, H. B. and W. C. Schroeder, 1953. Fishes of the Gulf of Maine. U.S. Fish and Wildlife Serv. Fish. Bull. 74.

Booth, R. A. 1967. A description of the larval stages of the tomcod, Microgadus tomcod, with comments on its spawning ecology. Ph.D. Thesis, Univ. Connecticut.

Chambers, J. R., J. A. Musick and J. Davis. 1976. Methods of distinguishing larval alewife from larval blueback herring. Chesapeake Sci. 17:93-100.

Cianci, J. M. 1969. Larval development of the alewife, Alosa pseudoharengus Wilson and the glut herring Alosa aestivalis Mitchell, M.S. Thesis Univ. Conn.

Doroshev, S. J. 1970. Biological features of the eggs, larval, and young of the striped bass (Roccus saxatilis Walbaum) in connection with the problem of its acclimatization in the USSR. J. Ichthiology 10:236-247.

Dovel, W. L. and J. R. Edmunds. 1971. Recent changes in striped bass spawning sites and commercial fishing areas in Upper Chesapeake Bay; possible influencing factors. Chesapeake Sci. 12:33-39.

Ecological Analysts, Inc. (EA). 1976. Lovett Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretive Report.

Ecological Analysts, Inc. (EA). 1977. Lovett Generating Station Entrainment and Impingement Studies. 1976 Annual Report.

Ecological Analysts, Inc. (EA). 1978a. Bowline Point Generating Station Entrainment Survival Studies. 1977 Annual Report.

Ecological Analysts, Inc. (EA). 1978b. Hudson River Thermal Effects Studies for Representative Important Species. Final Report.

Hildebrand, R. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. Bull. U.S. Bur. Fish. 43.

Krester, W. A. 1968. Aspects of striped bass larvae Morone saxatilis captured in the Hudson River near Cornwall, N.Y., April-August 1968. Consolidated Edison Company of New York, Inc.

Leim, A. H. 1924. The life history of the shad (Alosa sapidissima) with special reference to the factors limiting its abundance. Contrib. Canadian Biol. 2(11):161-284.

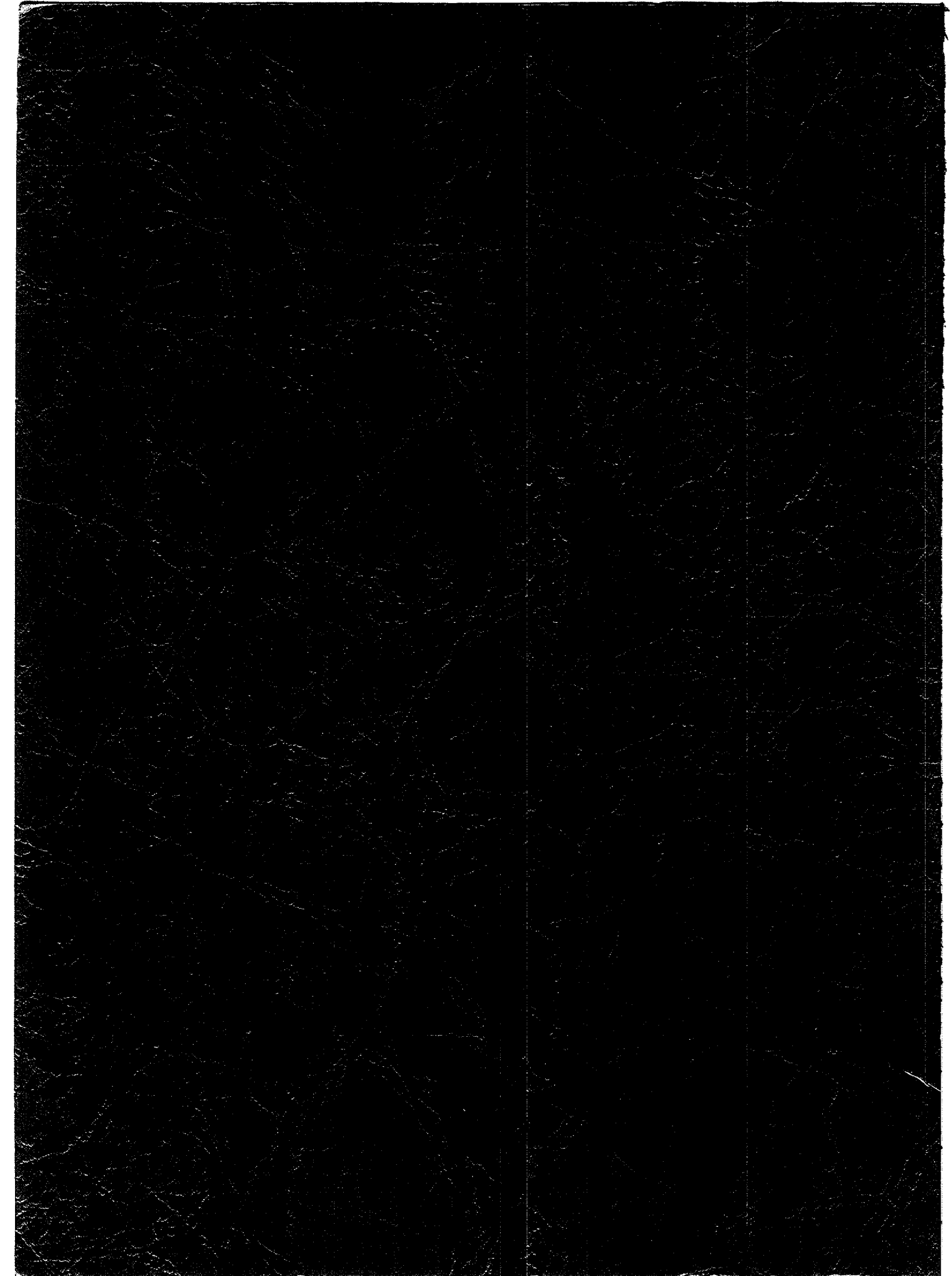
Lippson, A. J. and R. L. Moran. 1974. Manual for identification of early developmental stages of fishes of the Potomac River Estuary. Env. Tech. Center Martin Marietta Corp.

Mansueti, A. J. and J. D. Hardy, Jr. 1967. Development of fishes of the Chesapeake Bay region; an atlas of egg, larval, and juvenile stages. Natural Res. Inst., Univ. of Maryland. 202 pp.

Rathjen, W. F. and L. C. Miller. 1957. Aspects of the early life history of the striped bass (Roccus saxatilis) in the Hudson River. N.Y. Fish and Game J. 4:43-60.

Scotton, L. N., R. E. Smith, N. S. Smith, K. S. Price, and D. P. de Sylva. 1973. Pictorial guide to fish larvae of Delaware Bay with information and bibliographies useful for the study of fish larvae. College Marine Studies, Univ. Delaware, Delaware Bay Rept. Ser. 7. 206 pp.

Wang, J. C. S., and R. J. Kernehan. In press. Fishes of the Delaware Estuaries: A Guide to the Early Life Histories. EA Communications.



Report ORU71G1

BOWLINE POINT GENERATING STATION
REIMPINGEMENT STUDIES, 1977

Prepared for:

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared by:

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

August 1978

CONTENTS

	Page
1. INTRODUCTION	1-1
2. SUMMARY	2-1
3. METHODS AND MATERIALS	3-1
3.1 COLLECTION	3-1
3.2 RECAPTURES	3-1
4. RESULTS AND DISCUSSION	4-1
4.1 MONITORING DATA	4-1
4.2 UNIT 1 VERSUS UNIT 2 IMPINGEMENT AND REIMPINGEMENT	4-1
4.3 REIMPINGEMENT ANALYSIS	4-15
4.4 CONDITION EFFECTS ON RECAPTURE	4-19
REFERENCES	

LIST OF FIGURES

Number	Title
1-1	Diagram of Bowline Point plant site.
1-2	Bowline Point plant intake structure with Unit 2 barrier net in place during 1977 reimpingement studies.
3-1	Washwater discharge sampling system with collection apparatus in place at the Bowline Point plant intake.
4-1	Number of white perch impinged per hour at the Bowline Point plant intake Unit 1 between 12 and 17 January 1977.
4-2	Number of white perch impinged per hour at the Bowline Point plant intake Unit 2 between 12 and 17 January 1977.
4-3	Average temporal fluctuation in reimpingement probability at the Bowline Point plant Unit 1 for a single day of release (one color tag) 12-17 January 1977.
4-4	Total tag recovery at Bowline Point plant Unit 1 intake as a percentage of impingement abundance of white perch 12-17 January 1977.

LIST OF TABLES

Number	Title
4-1	Total number of each species collected during reimpingement study at the Bowline Point plant, Unit 1, 12-19 January 1977.
4-2	Total number of each species collected during reimpingement study at the Bowline Point plant, Unit 2, 12-19 January 1977.
4-3	Summary of reimpingement data for white perch 12-17 January 1977 at Bowline Point plant, Unit 1.
4-4	Summary of reimpingement data for white perch 12-17 January 1977 at Bowline Point plant, Unit 2.
4-5	Reimpinged white perch collected during reimpingement and survival studies subsequent to 17 January 1977 at Bowline Point plant Unit 1.
4-6	Monitoring of white perch over the period 17-19 January 1977, Bowline Point plant Unit 2.
4-7	Reimpinged white perch collected in impingement abundance samples subsequent to 12-19 January test period.
4-8	Mean daily tag recovery in percentage of daily impingement of white perch at Bowline Point plant Unit 1.
4-9	Summary of release versus recapture condition for white perch reimpinged at Unit 1, 12-17 January 1977.
4-10	Percentage survival of tagged versus nontagged white perch.

CHAPTER 1: INTRODUCTION

The Bowline Point Generating Station consists of two completely enclosed oil- and gas-fired steam-electric units, each of which has a nominal net generating capability of 622 MWe. Each unit has a separate once-through cooling water system that transfers waste heat from the condensers to the Hudson River. Cooling water from each unit is pumped from an intake structure on the northeast shore of Bowline Pond (Figure 1-1). The intake structure is 43 m (140 ft) wide, about 8.3 m (27 ft) deep at mean water level and consists of six bays, three for each unit (Figure 1-2). Each bay is approximately 5 m (16 ft) wide and equipped with a bar trash rack, a vertical traveling screen, and a 700 m^3/min (185,000 gal/min) circulating water pump. The trash racks and traveling screens remove debris and fish from the cooling water before it enters the circulating pumps. Fish and debris impinged on the traveling screens are returned to the pond via the wash water discharge pipe.

The total number of each of the fish species subject to impingement on the traveling screens at the Bowline Point plant has been estimated from impingement collection programs conducted since 1973 (LMS 1974, 1975, 1976). The interpretation of impingement abundance data will be affected by the extent to which individual fish may be impinged more than once, or "reimpinged." Significant undetected reimpingement of fish would result in overestimation of impingement abundance estimates.

The potential for recirculation and reimpingement of fish may be relatively high at the Bowline Point plant because of the physical location of the intake structure (Figures 1-1 and 1-2). The relatively small cross-sectional area of the Bowline Pond inlet and shallow-water shoals located on the river side of the inlet constitute a possible physical restriction to fish movement between pond and river. In addition, a potential chemical barrier to fish exchange occurs periodically when saline water is entrapped in the lower portions of the pond following downriver displacement of the saline water in the estuary.

A study was conducted during the period 12-17 January 1977 with the objective of quantifying the extent of fish reimpingement at the Bowline Point plant. This study also provided data for evaluation of the effectiveness of a net installed to prevent impingement of fish on Unit 2 traveling screens.

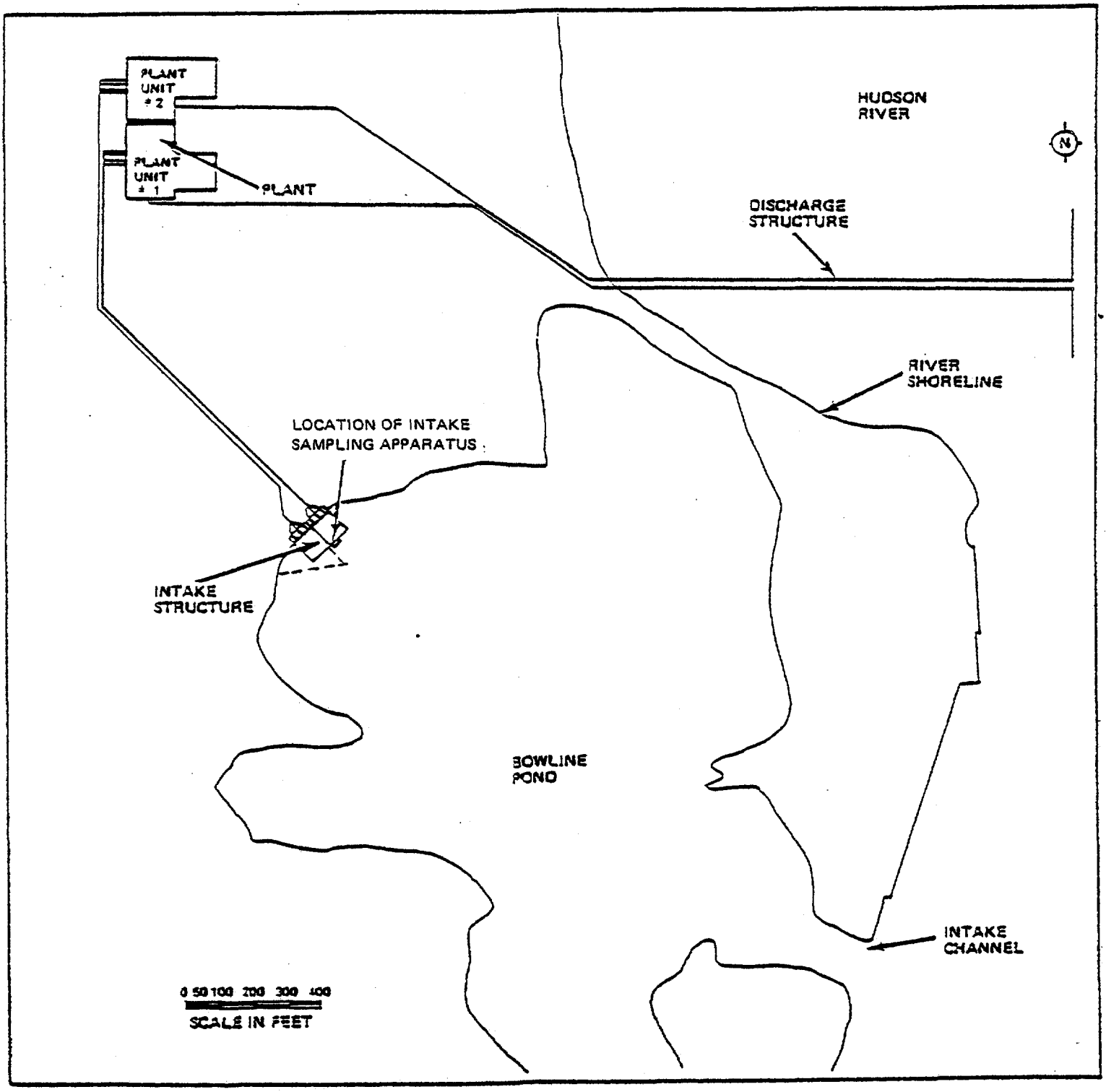


Figure 1-1. Diagram of Bowline Point plant site.

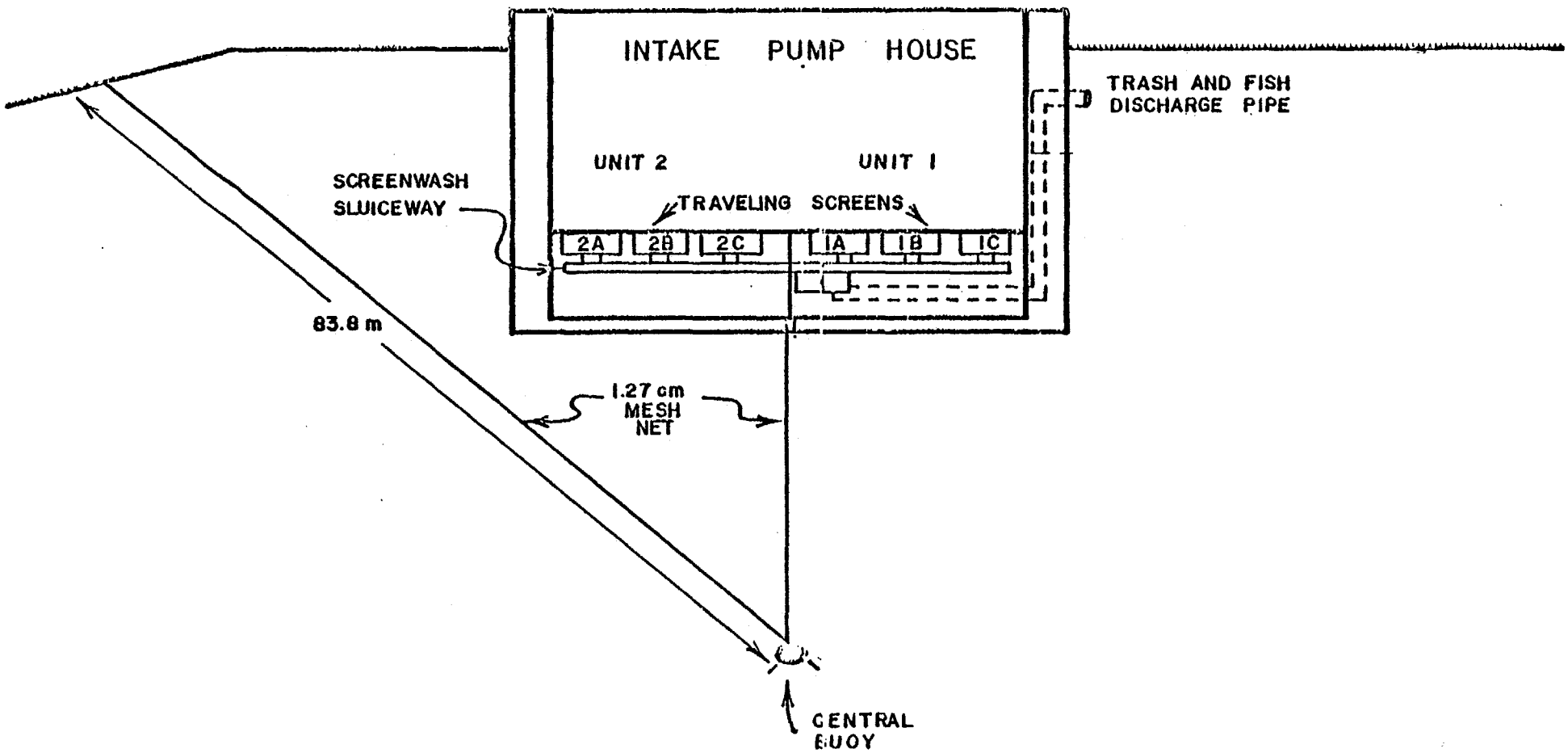


Figure 1-2. Bowline Point plant intake structure with Unit 2 barrier net in place during 1977 reimpingement studies.

CHAPTER 2: SUMMARY

White perch composed 49 percent of impingement collections during the period 12-19 January 1977 and were consequently selected to study the rate of reimpingement of fish at the Bowline Point Generating Station. During the period 12-17 January, 6,014 white perch were collected, tagged, and released at the intake screenwash pit; 1,144 tagged fish were subsequently recaptured. Only 53 of those fish reimpinged were collected at Unit 2, reflecting the relative distance of the two units from the screenwash discharge pipe. These recoveries indicated an overall tag recovery rate of 14.7 percent.

Both impingement and reimpingement exhibited marked diel patterns. Peak impingement occurred between 2000 and 0400 hours. Percentage reimpingement was maximum between 0800 and 1600 hours. The probability of reimpingement varied from 0.0 to 0.74 depending on time of day; however, the daily tag reimpingement rate averaged from 20 to 25 percent.

Tide stage also appeared to influence reimpingement. Reimpingement peaks occurred on flood tide and occasionally at slack tide when there was no net tidal flow away from the intake structure.

CHAPTER 3: METHODS AND MATERIALS

3.1 COLLECTION

The study design consisted of direct determinations of reimpingement by tagging and release of impinged white perch and monitoring of subsequent impingement collections for tag returns.

Fish were collected on a continuous basis at the impingement collection pit for tagging and monitoring of tag returns from 12 to 17 January 1977 (Figure 3-1). The collection net was removed from the pit and replaced every 30 minutes. Fish impinged on Unit 1 traveling screens were collected separately from those impinged on Unit 2 traveling screens. White perch were separated from other species, examined for tags, and placed in plastic transport containers filled with river water. White perch were then transferred from the transport containers, reexamined for tags, and placed in flow-through holding facility. The holding facility was located inside the intake structure in front of traveling screens 2a and 2b (see Figure 1-2) and consisted of two 4-x-4-x-2-ft-deep tanks fitted with plastic flow-through containers. River water was continuously circulated through the tanks at a rate that replaced the holding volume every 6 minutes. White perch remained in the holding tanks at least 15 minutes before tagging.

The fish were tagged by injection with colored latex paint, using a 25-gauge needle and a 10-cc syringe. A different color was used for each of five 24-hour marking periods (1000 to 1000):

12 January - Purple
13 January - Blue
14 January - Orange
15 January - Yellow
16 January - Green.

White perch that were live at capture were injected at the base of the dorsal fin. Stunned white perch were injected in the caudal fin. Dead white perch were tagged with an injection and a hole punch in the caudal fin. The tagged white perch were placed in the holding facility for 1-2 hours prior to release into the screenwash discharge pipe.

Screenwash pressures, circulating pump operation, and tidal height and stage were recorded hourly.

3.2 RECAPTURES

White perch recaptured during the period 12-17 January were recorded and rereleased. Subsequent to this 5-day continuous wash and release period, impingement screens were washed once every 12 hours (17-19 January). During this 12-hour monitoring phase, recaptured white perch were preserved and recorded.

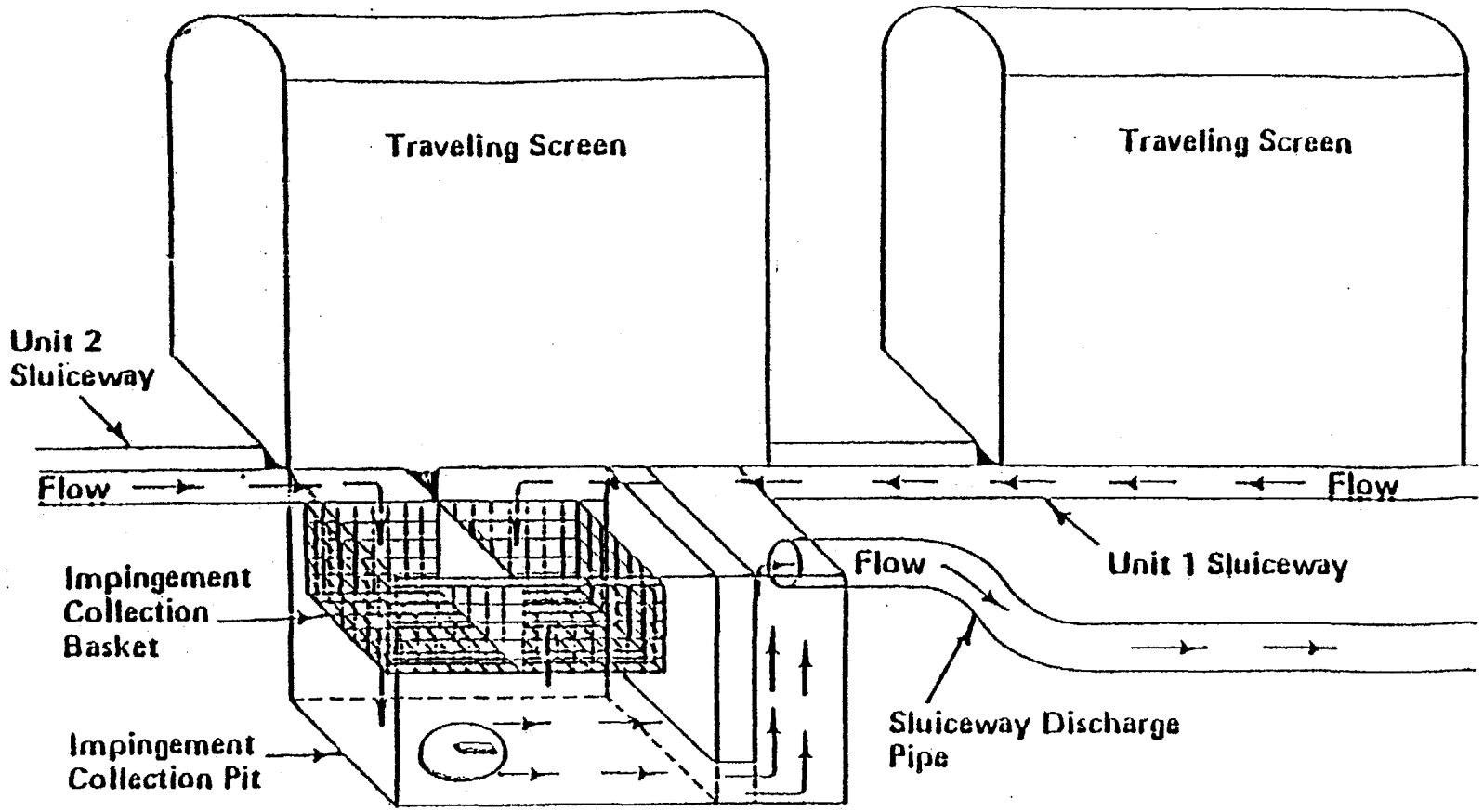


Figure 3-1. Washwater discharge sampling system with collection apparatus in place at the Bowline Point plant intake.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 MONITORING DATA

White perch is the most abundant species impinged at the Bowline Point plant (EA 1976; LMS 1974, 1976). Therefore, the species was chosen as the object of study for the 1977 reimpingement survey. White perch accounted for about 49 percent of the fish impinged during the 7-day survey (Tables 4-1 and 4-2); 4,335 white perch were impinged at Unit 1, and 3,299 at Unit 2. During the study Bowline Pond temperature averaged 2.7 C and conductivity averaged 2,650 µmho.

There were a total of 1,144 tag recoveries from various impingement studies: 1,031 at Unit 1 (90.1 percent), 53 at Unit 2 (4.6 percent), and 59 for which the Unit was uncertain (5.3 percent). During the period 12-17 January 1977, a total of 6,014 white perch were collected, tagged, and released. Of these, 885 were recaptured during the 5 days of continuous collection (Table 4-3, Unit 1; Table 4-4, Unit 2); this represents an overall tag recovery rate of 14.7 percent. At Unit 1, 31 tagged fish were captured in a catch of 731 white perch from 17-19 January during the 12-hour interval washing (Table 4-5). At Unit 2, five tagged fish were captured in a catch of 530 white perch during this same period (Table 4-6). Twenty-nine tagged fish were recaptured at Unit 1 during impingement survival studies. No tags were recovered at Unit 2 during impingement survival studies. At Unit 1, 79 tagged white perch were recovered by Lawler, Matusky & Skelly Engineers (LMS) in impingement abundance collections; at Unit 2, five tagged white perch were recovered (Table 4-7). LMS recovered an additional 59 tagged white perch at either Unit 1 or Unit 2 (the recovery site was not specified).

Diel changes in the number of white perch impinged were very pronounced. Hourly fluctuations in the number of white perch impinged at each unit during 12-17 January are depicted in Figure 4-1 for Unit 1 and Figure 4-2 for Unit 2. Peak impingement occurred between 2000 and 0400 hours. Peak impingement was of greater duration with more fluctuation than in 1976 studies (EA 1976). Higher nighttime impingement has previously been recorded at Bowline Point and other power plants along the Hudson (TI 1975, EA 1976) and is presumably due to shoalward movements of the young fish.

4.2 UNIT 1 VERSUS UNIT 2 IMPINGEMENT AND REIMPINGEMENT

In the first 5 days of the study, reimpinged fish represented 19.3 percent of the total number of fish impinged at Unit 1, compared with 1.5 percent of the total number impinged at Unit 2. Lower reimpingement might be expected at the Unit 2 side of the intake because it is located farther from the sluiceway discharge. The low reimpingement rate for Unit 2 may also result partly from the diversion effect of the net in front of the Unit 2 side of the intake. The number of fish reimpinged at Unit 2 is so low that no discernible patterns appear. Therefore, the Unit 2 impingement and reimpingement data presented in Tables 4-4, 4-6, and 4-7 were not used to quantify reimpingement.

TABLE 4-1 TOTAL NUMBER OF EACH SPECIES COLLECTED DURING REIMPINGEMENT STUDY AT THE BOWLINE POINT PLANT, UNIT 1, 12 -19 JANUARY 1977

Species	Date, Time, and Number Collected							Total Number	Percentage of Total
	12-13 JAN 1000-1000	13-14 JAN 1000-1000	14-15 JAN 1000-1000	15-16 JAN 1000-1000	16-17 JAN 1000-1000	17-18 JAN 1000-0900	18-19 JAN 0900-0930		
White perch[a]	963	855	718	686	423	292	408	4,345	45.48
Gizzard shad	429	695	451	549	401	359	547	3,431	36.00
Striped bass	100	130	146	144	142	63	110	835	8.76
Rainbow smelt	135	209	173	95	101	43	44	800	8.39
White catfish	7	8	6	7	4	5	7	44	0.46
Atlantic tomcod	7	1	4	3	5	6	7	33	0.35
American eel	1	3	2	1	3	2	0	12	0.13
Alewife	4	2	1	1	1	1	0	10	0.10
Goldfish	2	2	0	0	1	3	1	9	0.09
Blueback herring	1	0	1	0	1	2	1	6	0.06
Pumpkinseed	2	0	0	1	1	0	1	5	0.05
Three-spined stickleback	1	1	1	0	0	0	0	3	0.03
Bluegill sunfish	1	0	1	0	0	1	0	3	0.03
Sculpin	0	1	1	0	0	0	0	2	0.02
American shad	0	0	0	1	0	0	0	1	0.01
Banded killifish	1	0	0	0	0	0	0	1	0.01
Carp	0	1	0	0	0	0	0	1	0.01
Redbreast sunfish	0	0	1	0	0	0	0	1	0.01
Totals	1,654	1,908	1,506	1,488	1,083	777	1,126	9,542	

(a) Numbers do not include reimpinged fish.

TABLE 4-2 TOTAL NUMBER OF EACH SPECIES COLLECTED DURING REIMPINGEMENT STUDY AT THE BOWLINE POINT PLANT, UNIT 2, 12-19 JANUARY 1977

Species	Date, Time, and Number Collected							Total Number	Percentage of Total
	12-13 JAN 1000-1000	13-14 JAN[a] 1000-1000	14-15 JAN 1000-1000	15-16 JAN 1000-1000	16-17 JAN 1000-1000	17-18 JAN 1000-0900	18-19 JAN[b] 0900-0930		
White perch[c]	774	834	459	468	236	174	351	3,296	54.18
Gizzard shad	138	251	267	194	196	258	375	1,679	27.57
Striped bass	33	68	68	58	44	31	91	393	6.46
Rainbow smelt	80	146	89	57	60	46	61	541	8.89
White catfish	5	7	2	4	4	7	5	34	0.56
Atlantic tomcod	7	11	13	15	13	15	19	93	1.53
American eel	2	4	1	1	2	1	2	13	0.21
Alewife	0	1	1	0	0	0	0	2	0.03
Goldfish	1	0	1	0	0	1	0	3	0.05
Blueback herring	2	2	1	0	0	1	1	7	0.11
Pumpkinseed	0	1	0	0	0	2	0	3	0.05
Three-spined stickleback	1	2	0	0	0	1	2	6	0.10
Bluegill sunfish	1	0	0	1	1	1	0	4	0.07
Sculpin	0	0	1	0	0	0	0	1	0.02
Spottail shiner	1	1	1	0	1	0	0	4	0.07
Banded killifish	1	0	1	1	0	0	0	3	0.05
Carp	1	0	0	0	0	0	0	1	0.02
Largemouth bass	0	0	0	0	0	0	1	1	0.02
Tessallated darter	0	0	0	0	0	0	1	1	0.02
Brown bullhead	0	0	0	0	0	0	1	1	0.02
Totals	1,047	1,328	905	801	557	538	910	6,086	

(a) 2A screenwashed for first time in 7 days.
(b) 2A screenwashed for first time in 5 days.
(c) Numbers do not include reimpinged fish.

TABLE 4-3 SUMMARY OF REIMPINGEMENT DATA FOR WHITE PERCH 12-17 JANUARY 1977 AT BOWLINE POINT PLANT, UNIT 1

Date	Hour[b]	White Perch (No.) NT[c]	N_i[d]	R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpinged Day 1	Day 2	Day 3	Day 4	Day 5
12 JAN	1100	12																							
	1200	23																							
	1300	12	0	0	0	0	0	0													0				
	1400	8	0	0	0	0	0	0													0				
	1500	6	0	0	0	0	0	0													0				
	1600	8	2	1	25	2	0	2													25				
	1700	4	0	0	0	0	0	0													0				
	1800	35	1	0	3	1	0	1													3				
	1900	51	3	0	6	3	0	3													6				
	2000	57	1	0	2	1	0	1													2				
	2100	56	4	0	7	4	0	4													7				
	2200	66	0	0	0	0	0	0													0				
	2300	88	7	1	8	7	0	7													8				
	2400	37	2	0	5	2	0	2													5				
13 JAN	0100	64	8	1	12	8	0	8													12				
	0200	61	5	1	8	4	1	5													8				
	0300	64	8	0	12	8	0	8													12				
	0400	84	10	0	12	10	0	10													12				
	0500	68	20	0	29	20	0	20													29				
	0600	72	20	3	28	20	0	20													28				
	0700	64	19	0	30	19	0	19													30				
	0800	42	12	0	29	12	0	12													29				
	0900	43	19	0	44	19	0	19													25				
	1000	32	8	0	25	8	0	8													44				
	1100	13	3	0	23	3	0	3													23				
	1200	17	8	0	47	7	1	8													47				
	1300	12	3	0	25	3	0	3	0	0	0										25	0			
	1400	18	3	0	17	3	0	3	0	0	0										17	0			
	1500	12	1	0	8	1	0	1	0	0	0										8	0			
	1600	20	5	1	25	2	0	2	3	0	3										10	15			
	1700	13	3	0	23	2	0	2	1	0	1										15	8			
	1800	26	2	1	8	1	0	1	1	0	1										4	4			
	1900	67	5	0	8	3	0	3	2	0	2										5	3			
	2000	58	6	0	10	3	0	3	3	0	3										5	5			
	2100	35	5	1	14	1	0	1	4	0	4										3	11			
	2200	62	8	0	13	1	0	1	7	0	7										2	11			
	2300	92	19	2	21	2	1	3	16	0	16										3	18			
	2400	34	7	1	21	0	1	1	5	1	6										3	18			

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish collected in pit collection basket at end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.

TABLE 4-3 (CONT.)

Date	Hour[b]	White Perch (No.) N_T[c]	N_i[d]	R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpined Day 1	Day 2	Day 3	Day 4	Day 5
14 JAN	0100	53	11	0	21	0	0	0	11	0	11										0	21			
	0200	55	10	3	18	0	1	1	9	0	9										2	16			
	0300	44	3	1	7	0	0	0	3	0	3										0	7			
	0400	63	2	2	3	0	0	0	2	0	2										0	3			
	0500	82	21	1	26	1	0	1	20	0	20										1	25			
	0600	92	31	1	34	1	1	2	29	0	29										2	32			
	0700	54	7	0	13	0	0	0	7	0	7										0	13			
	0800	61	30	1	49	1	0	1	29	0	29										2	47			
	0900	42	31	0	74	2	0	2	29	0	29										5	69			
	1000[f]	43	21	0	49	1	0	1	19	1	20										2	47			
	1100	12	5	0	42	0	0	0	5	0	5										0	42			
	1200	26	14	1	54	1	2	3	10	1	11										12	42			
	1300	19	6	0	32	0	0	0	6	0	6	0	0	0							0	32	0		
	1400	20	7	0	35	1	0	1	5	1	6	0	0	0							5	30	0		
	1500	23	1	0	4	0	0	0	1	0	1	0	0	0							0	4	0		
	1600	22	7	0	32	0	0	0	6	1	7	0	0	0							0	32	0		
	1700	21	5	0	24	1	0	1	2	2	4	0	0	0							5	19	0		
	1800	46	8	2	17	0	0	0	2	1	3	5	0	5							0	6	11		
	1900	62	9	0	14	0	0	0	2	0	2	7	0	7							0	3	11		
	2000	36	6	0	17	0	2	2	2	0	2	2	0	2							6	6	6		
	2100	42	8	2	19	0	0	0	0	0	0	8	0	8							0	0	19		
	2200	37	3	1	8	0	0	0	0	0	0	3	0	3							0	0	8		
	2300	36	7	0	19	0	1	1	2	0	2	4	0	4							3	5	11		
	2400	37	2	0	5	0	0	0	0	0	0	2	0	2							0	0	5		
15 JAN	0100	43	11	0	26	0	0	0	1	0	1	10	0	10							0	2	24		
	0200	44	4	0	9	0	0	0	2	0	2	1	1	2							0	4	5		
	0300	33	3	0	9	0	0	0	1	0	1	2	0	2							0	3	6		
	0400	56	3	0	5	0	0	0	0	0	0	3	0	3							0	0	5		
	0500	69	10	0	14	0	0	0	4	0	4	6	0	6							0	6	8		
	0600	42	3	0	7	0	0	0	1	0	1	2	0	2							0	2	5		
	0700	74	26	1	35	0	1	1	1	0	1	24	0	24							1	1	33		
	0800	25	8	1	32	0	0	0	0	0	0	8	0	8							0	0	32		
	0900	31	19	0	61	0	0	0	0	0	0	19	0	19							0	0	61		
	1000	22	15	0	68	1	1	2	2	0	2	10	1	11							9	9	50		
	1100	17	4	0	24	0	0	0	0	1	1	3	0	3							0	6	18		
	1200	9	4	0	44	0	0	0	0	0	0	4	0	4							0	0	44		
	1300	11	7	0	64	0	0	0	2	0	2	5	0	5	0	0	0				0	18	46	0	
	1400	10	3	0	30	0	0	0	0	0	0	2	1	3	0	0	0				0	0	30	0	
	1500	9	3	0	33	1	0	1	1	1	2	0	0	0	0	0	0				11	22	0	0	
	1600	10	1	0	10	0	0	0	0	0	0	1	0	1	0	0	0				0	0	10	0	
	1700	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1800	50	6	0	12	0	0	0	1	0	1	5	0	5	0	0	0				0	2	10	0	
	1900	23	1	0	4	0	0	0	0	0	0	1	0	1	0	0	0				0	0	4	0	

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish in pit collection basket at end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.
(f) Screenwash at screen 2A (0900-0930) fish not released; screenwash at all other screens (0930-1000) fish released.

TABLE 4-3 (CONT.)

Date	Hour[b]	White Perch (No.) N_T[c]	White Perch (No.) N_i[d]	White Perch (No.) R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpinged Day 1	Day 2	Day 3	Day 4	Day 5
15 JAN	2000	28	2	1	7	0	0	0	0	0	0	1	0	1	1	0	1				0	0	3	4	
	2100	45	5	1	11	1	0	1	0	0	0	1	0	1	3	0	3				2	0	2	7	
	2200	53	4	2	8	0	0	0	0	0	0	0	0	0	4	0	4				0	0	0	8	
	2300	47	8	1	17	0	0	0	0	0	0	0	0	0	8	0	8				0	0	0	17	
	2400	61	7	1	12	0	0	0	0	0	0	0	0	0	7	0	7				0	0	0	12	
16 JAN	0100	43	16	0	37	1	0	1	0	0	0	4	1	5	10	0	10				2	0	12	23	
	0200	29	8	0	28	0	0	0	0	0	0	2	0	2	6	0	6				0	0	7	21	
	0300	24	6	0	25	0	0	0	0	0	0	2	1	3	3	0	3				0	0	12	13	
	0400	32	6	0	19	0	0	0	0	0	0	0	0	0	6	0	6				0	0	0	19	
	0500	40	6	1	15	1	0	1	1	0	1	1	0	1	3	0	3				2	2	2	9	
	0600	98	7	0	7	0	0	0	0	0	0	1	0	1	6	0	6				0	0	1	6	
	0700	69	5	0	7	2	0	2	0	0	0	1	0	1	2	0	2				3	0	1	3	
	0800	55	15	2	27	0	1	1	0	0	0	0	0	0	14	0	14				2	0	0	25	
	0900	21	14	0	67	0	0	0	0	0	0	0	0	0	14	0	14				0	0	0	67	
	1000	16	8	0	50	0	0	0	0	1	1	1	0	1	6	0	6				0	6	6	38	
	1100	11	4	0	36	0	0	0	1	0	1	0	0	0	3	0	3				0	9	0	27	
	1200	23	17	0	74	0	1	1	1	0	1	0	0	0	15	0	15				4	4	0	66	
	1300	14	7	0	50	1	0	1	0	0	0	0	0	0	6	0	6	0	0	0	7	0	0	43	0
	1400	8	4	0	50	0	1	1	0	0	0	0	0	0	3	0	3	0	0	0	13	0	0	37	0
	1500	12	5	0	42	0	1	1	0	0	0	0	0	0	2	1	3	1	0	1	8	0	0	25	9
	1600	6	1	0	17	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	17	0
	1700	9	3	0	33	0	1	1	0	0	0	0	0	0	0	1	1	1	0	1	11	0	0	11	11
	1800	25	3	0	12	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	12	0
	1900	44	4	0	9	0	0	0	0	1	1	1	0	1	1	0	1	1	0	1	0	2	2	2	3
	2000	25	3	0	12	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	12
	2100	10	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	10
	2200	42	6	2	14	0	1	1	0	0	0	0	0	0	2	0	2	3	0	3	2	0	0	5	7
	2300	27	9	0	33	0	0	0	0	0	0	0	0	0	1	0	1	8	0	8	0	0	0	4	29
	2400	28	11	1	39	0	0	0	1	0	1	0	0	0	3	0	3	7	0	7	0	4	0	10	25
17 JAN	0100	24	3	0	12	0	0	0	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0	4	8
	0200	27	8	0	30	1	0	1	0	0	0	0	0	0	2	1	3	4	0	4	4	0	0	11	15
	0300	14	3	0	21	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	21
	0400	21	2	0	10	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	10
	0500	18	2	0	11	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	5	6
	0600	41	5	0	12	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	12
	0700	42	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
	0800	25	3	0	12	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	12
	0900	14	4	0	29	0	0	0	0	0	0	0	0	0	0	1	1	3	0	3	0	0	0	7	21
	1000	7	3	0	43	0	0	0	0	1	1	0	1	1	0	0	0	1	0	1	0	14	14	0	15

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish in pit collection basket at the end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.

TABLE 4-4 SUMMARY OF REIMPINGEMENT DATA FOR WHITE PERCH 12-17 JANUARY 1977 AT BOWLINE POINT PLANT, UNIT 2

Date	Hour[b]	White Perch (No.) N_T[c]	N_i[d]	R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpinged Day 1	Day 2	Day 3	Day 4	Day 5
12 JAN	1100	38																							
	1200	3																							
	1300	3	0	0	0	0	0	0													0				
	1400	12	0	0	0	0	0	0													0				
	1500	10	0	0	0	0	0	0													0				
	1600	8	0	0	0	0	0	0													0				
	1700	5	0	0	0	0	0	0													0				
	1800	34	0	0	0	0	0	0													0				
	1900	21	2	0	10	2	0	2													10				
	2000	27	0	0	0	0	0	0													0				
	2100	30	0	0	0	0	0	0													0				
	2200	24	0	0	0	0	0	0													0				
	2300	25	0	0	0	0	0	0													0				
	2400	29	0	0	0	0	0	0													0				
13 JAN	0100	46	0	0	0	0	0	0													0				
	0200	63	0	0	0	0	0	0													0				
	0300	47	0	0	0	0	0	0													0				
	0400	43	0	0	0	0	0	0													0				
	0500	43	1	0	2	0	1	1													2				
	0600	51	0	0	0	0	0	0													0				
	0700	30	0	0	0	0	0	0													0				
	0800	21	0	0	0	0	0	0													0				
	0900	32	1	1	3	1	0	1													3				
	1000	26	2	1	8	2	0	2													8				
	1100	5	1	0	20	1	0	1													0				
	1200	3	0	0	0	0	0	0													12	0			
	1300	8	1	0	12	1	0	1	0	0	0										0	0			
	1400	6	0	0	0	0	0	0	0	0	0										0	0			
	1500	3	0	0	0	0	0	0	0	0	0										0	0			
	1600	8	1	0	12	0	0	0	1	0	1										0	12			
	1700	5	0	0	0	0	0	0	0	0	0										0	0			
	1800	15	0	0	0	0	0	0	0	0	0										0	0			
	1900	37	1	0	3	0	0	0	1	0	1										0	3			
	2000	24	0	0	0	0	0	0	0	0	0										0	0			
	2100	17	0	0	0	0	0	0	0	0	0										0	0			
	2200	15	0	0	0	0	0	0	0	0	0										0	0			
	2300	32	0	0	0	0	0	0	0	0	0										0	0			
	2400	40	0	0	0	0	0	0	0	0	0										0	0			

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish in pit collection basket at the end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.

TABLE 4-4 (CONT.)

Date	Hour[b]	White Perch (No.) N_T[c]	N_i[d]	R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpinged Day 1	Day 2	Day 3	Day 4	Day 5
14 JAN	0100	27	1	0	4	0	0	0	0	1	1										0	4			
	0200	39	0	0	0	0	0	0	0	0	0										0	0			
	0300	52	0	0	0	0	0	0	0	0	0										0	0			
	0400	64	0	0	0	0	0	0	0	0	0										0	0			
	0500	48	0	0	0	0	0	0	0	0	0										0	0			
	0600	42	1	0	2	0	0	0	1	0	1										0	2			
	0700	49	0	0	0	0	0	0	0	0	0										0	0			
	0800	13	0	0	0	0	0	0	0	0	0										0	0			
	0900	14	1	0	7	0	0	0	1	0	1										0	7			
	(f) 1000	209	0	0	0	0	0	0	0	0	0										0	0			
	1100	3	1	0	33	0	0	0	1	0	1										0	33			
	1200	4	1	0	25	0	0	0	1	0	1										0	25			
	1300	4	1	0	25	0	0	0	1	0	1	0	0	0							0	25	0		
	1400	3	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1500	7	1	0	14	0	0	0	1	0	1	0	0	0							0	14	0		
	1600	8	1	0	12	1	0	1	0	0	0	0	0	0								12			
	1700	8	1	0	12	0	0	0	0	1	1	0	0	0							0	12	0		
	1800	13	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1900	29	2	0	7	0	0	0	2	0	2	0	0	0							0	7	0		
	2000	27	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	2100	15	2	1	13	0	0	0	0	0	0	2	0	2							0	0	13		
	2200	9	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	2300	21	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	2400	10	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
15 JAN	0100	17	1	0	6	0	0	0	1	0	1	0	0	0							0	6	0		
	0200	14	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0300	28	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0400	36	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0500	53	1	0	2	0	0	0	1	0	1	0	0	0							0	2	0		
	0600	26	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0700	49	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0800	20	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	0900	18	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1000	13	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1100	8	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1200	6	0	0	0	0	0	0	0	0	0	0	0	0							0	0	0		
	1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0		
	1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1500	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1600	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1700	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish in pit collection basket at the end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.
(f) 2A screenwash 0900-0930; all other screens 0930-1000.

TABLE 4-4 (CONT.)

Date	Hour[b]	White Perch (No.) N_T[c]	N_i[d]	R-L[e]	Total Reimpinged (Percent)	Reimpinged Fish by Release Day[a] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T	Percentage Reimpinged Day 1	Day 2	Day 3	Day 4	Day 5
15 JAN	1800	22	1	0	4	0	0	0	0	0	0	1	0	1	0	0	0				0	0	4	0	
	1900	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	2000	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	2100	27	1	0	4	1	0	1	0	0	0	0	0	0	0	0	0				4	0	0	0	
	2200	21	1	1	5	1	0	1	0	0	0	0	0	0	0	0	0				5	0	0	0	
	2300	14	1	1	7	0	0	0	0	0	0	1	0	1	0	0	0				0	0	7	0	
	2400	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
16 JAN	0100	24	2	1	8	0	0	0	1	0	1	0	0	0	1	0	1				0	4	0	4	
	0200	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	0300	19	2	0	10	0	0	0	0	0	0	0	0	0	2	0	2				0	0	0	0	
	0400	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	0500	36	1	0	3	0	0	0	1	0	1	0	0	0	0	0	0				0	3	0	0	
	0600	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	0700	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	0800	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	0900	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1000	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1100	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1200	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
	1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1400	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1500	5	1	0	20	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	20	0
	1600	2	1	0	50	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	50	0
	1700	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1800	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1900	17	2	0	12	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	6	6	0
	2000	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2100	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2200	12	1	0	8	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	8	0	0
	2300	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2400	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 JAN	0100	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0200	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0300	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0400	5	1	0	20	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	20	0	0
	0500	12	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	8
	0600	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0700	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0800	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0900	7	2	0	29	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	29
	1000	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(a) Reimpinged fish (N_i) classified by day of release (i.e., color of tag) A = Alive, D = Dead, T = Total.
(b) Hour refers to interval of collection, e.g., 1100 refers to fish collected between 1000 and 1100.
(c) N_T = total number of impinged white perch excluding fish in pit collection basket at the end of each 8-hour shift.
(d) N_i = number of previously impinged fish (i.e., tags).
(e) R-L = reimpinged live.

TABLE 4-5 REIMPINGED WHITE PERCH COLLECTED DURING REIMPINGEMENT AND SURVIVAL STUDIES SUBSEQUENT TO 17 JANUARY 1977 AT BOWLINE POINT PLANT UNIT 1

Date	Hour	White Perch (No.)[a] N_T	White Perch (No.)[a] N_i	Percent Reimpinged	Release Condition[b] Day 1 A	Day 1 D	Day 1 T	Day 2 A	Day 2 D	Day 2 T	Day 3 A	Day 3 D	Day 3 T	Day 4 A	Day 4 D	Day 4 T	Day 5 A	Day 5 D	Day 5 T
17 JAN	1000-2100	115	14		0	0	0	1	0	1	0	0	0	0	5	5	3	5	8
Basket		10	3		0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
		125	17	13.6	0	1	1	1	0	1	0	0	0	0	5	5	5	5	10
17-18 JAN	2100-0900	187	6		0	1	1	0	0	0	1	0	1	0	1	1	1	2	3
Basket		3	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		190	6	3.2	0	1	1	0	0	0	1	0	1	0	1	1	1	2	3
18 JAN	0900-2030	190	4		0	2	2	1	0	1	0	1	1	0	0	0	0	0	0
Basket		11	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		201	4	2.0	0	2	2	1	0	1	0	1	1	0	0	0	0	0	0
18-19 JAN	2030-0930	205	4		0	0	0	1	0	1	0	0	0	0	0	0	3	0	3
Basket		10	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		215	4	2.0	0	0	0	1	0	1	0	0	0	0	0	0	3	0	3
27-28 JAN	1700-0500	251	15	6.0	0	4	4	0	3	3	0	4	4	0	1	1	0	3	3
10-11 FEB	1700-0500	454	12	2.6	0	2	2	0	5	5	0	2	2	0	3	3	0	0	0
24-25 FEB		698	1	0.1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
25 MAR		33	1	3.0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

(a) N_T = total number of impinged fish; N_i = number of previously impinged fish.
(b) A = Alive; D = Dead; T = Total.

TABLE 4-6 MONITORING OF WHITE PERCH OVER THE PERIOD 17-19 JANUARY 1977, BOWLINE POINT PLANT UNIT 2

Date	Hour	White Perch (No.)[a] N_T	White Perch (No.)[a] N_i	Percent Reimpinged	Release Condition[b] Day 1 A	Day 1 D	Day 1 T	Day 2 A	Day 2 D	Day 2 T	Day 3 A	Day 3 D	Day 3 T	Day 4 A	Day 4 D	Day 4 T	Day 5 A	Day 5 D	Day 5 T
17 JAN	1000-2100	57	3		0	1	1	0	0	0	0	0	0	1	0	1	0	1	1
Basket		12	0																
		69	3	4.3	0	1	1	0	0	0	0	0	0	1	0	1	0	1	1
17-18 JAN	2100-0900	101	1		0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Basket		8	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		109	1	0.9	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
18 JAN	0900-2030[c]	95	0																
Basket		12	0																
		107	0	0.0															
18-19 JAN	2030-0930	228	1		0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Basket		17	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		245	1	0.4	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0

(a) N_T = total number of impinged fish; N_i = number of previously impinged fish (i.e., tags).
(b) A = Alive; D = Dead; T = Total.
(c) 0900 - 0930 2A screenwash.

TABLE 4-7 REIMPINGED WHITE PERCH COLLECTED IN IMPINGEMENT ABUNDANCE SAMPLES SUBSEQUENT TO 12-19 JANUARY TEST PERIOD [a]

Date	Time	Number Reimpinged Unit 1	Unit 2	Unit 1 or 2	Reimpinged White Perch by Release Day [b] 1 A	1 D	1 T	2 A	2 D	2 T	3 A	3 D	3 T	4 A	4 D	4 T	5 A	5 D	5 T
19-20 JAN	0900-0920		1		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	0900-0920	4			0	0	0	1	0	1	0	0	0	0	0	0	3	0	3
22-23 JAN	0923-1050		1		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
24-25 JAN	0845-0920		1		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	0845-0920	1			1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
26-27 JAN	1115-1200	33			7	0	7	8	0	8	8	0	8	1	0	1	9	0	9
29-30 JAN	0935-0945	3			1	0	1	2	0	2	0	0	0	0	0	0	0	0	0
31 JAN - 1 FEB	1005-0905		1		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5-6 FEB	0940-1000	4			1	0	1	1	0	1	0	0	0	1	0	1	1	0	1
	0940-1000		1		1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
9-10 FEB	0940-1000	1			0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
12-13 FEB	0835-0925	33			5	0	5	7	0	7	12	0	12	8	0	8	1	0	1
14-15 FEB	0925-0853			12	2	0	2	5	0	5	2	0	2	2	0	2	1	0	1
16-17 FEB	0915-0907			1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
19-20 FEB	0915-0935			7	2	0	2	1	1	2	1	0	1	1	1	2	0	0	0
21-22 FEB	0925-0911			1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
23-24 FEB	0908-0913			1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
28-29 FEB	0920-0915			5	0	0	0	1	1	2	2	0	2	0	0	0	0	1	1
2-3 MAR	0945-0910			31	3	0	3	2	0	2	0	0	0	0	0	0	26	0	26
7 MAR	0915-2130			1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Total	79	5	59															

(a) Source: Lawler, Matusky & Skelly Engineers.
(b) A = Alive; D = Dead; T = Total.

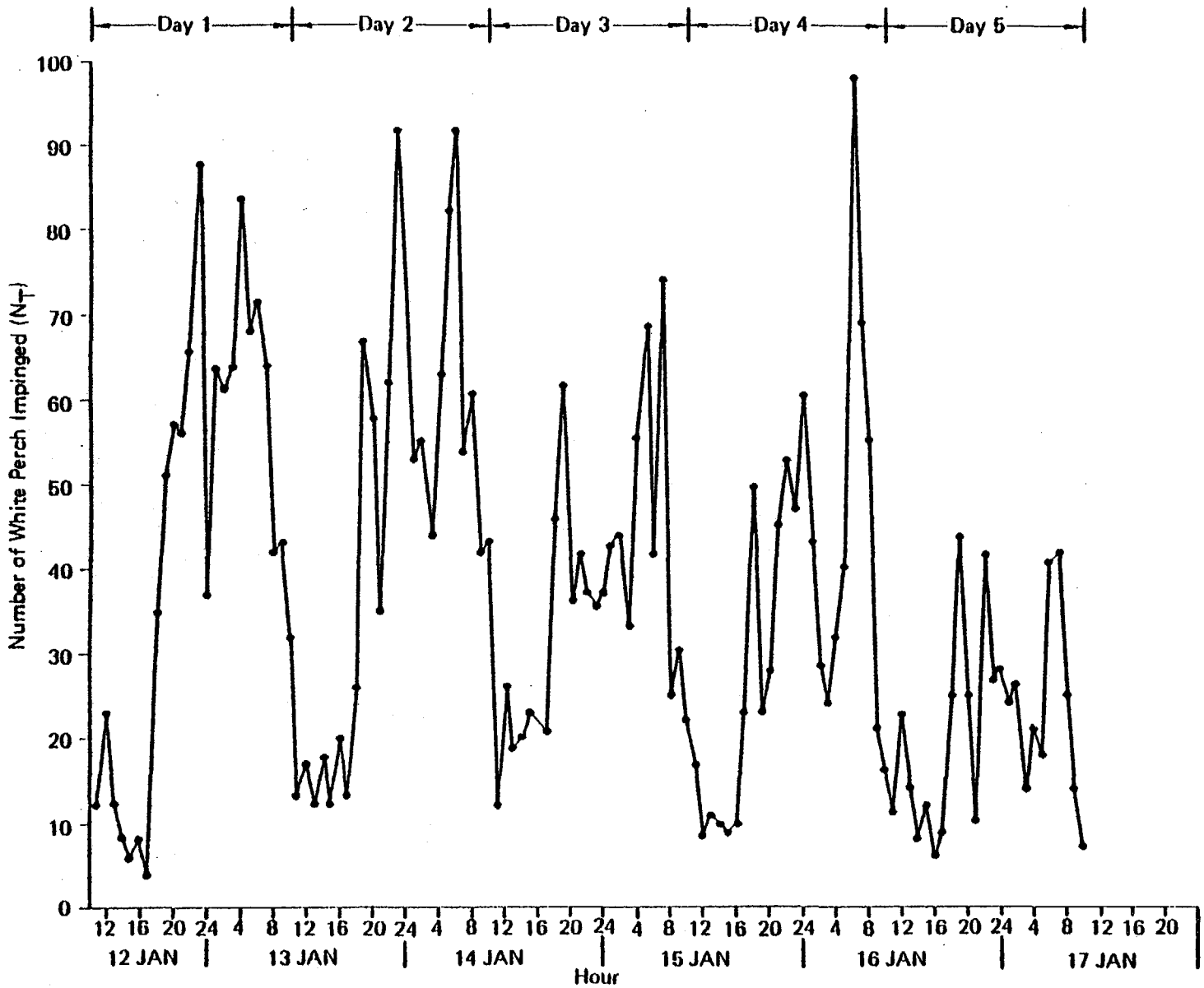


Figure 4-1. Number of white perch impinged per hour at the Bowline Point plant intake Unit 1 between 12 and 17 January 1977.

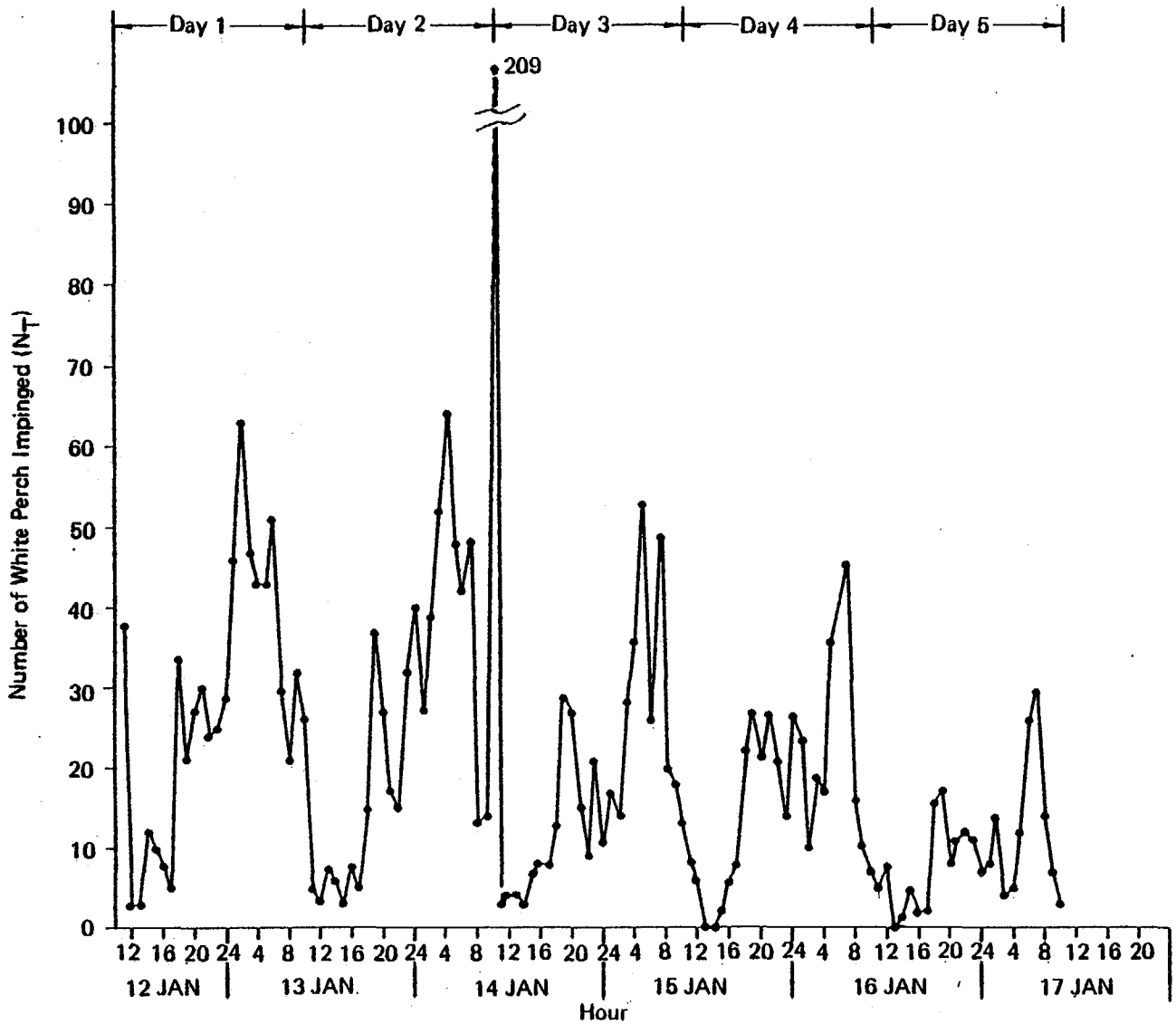


Figure 4-2. Number of white perch impinged per hour at the Bowline Point plant intake Unit 2 between 12 and 17 January 1977.

4.3 REIMPINGEMENT ANALYSIS

For analysis of the data, fish reimpingement has been expressed as the percent of the total impingement collection constituted by tag returns, i.e., reimpinged fish:

$$R = N_i/N_T \times 100$$

where

R = percent reimpingement

N_i = number of previously impinged fish (tags)

N_T = total number of impinged fish.

Since all impinged white perch were marked during the study period, this percentage can be considered to represent the fraction of impinged fish in the total population subject to impingement at the intake structure. Therefore, it also represents the probability of reimpingement at any point in time during this study.

$$N_i/N_T(t) = P_r(t)$$

where

$P_r(t)$ = time-varying probability of reimpingement (EA 1976).

The average variation in N_i/N_T with time for any single color tag (representing one 24-hour period of release) is shown in Figure 4-3. The percentage of tags in the impingement collections increased to about 30 percent toward the end of the 24-hour release period, remained at this level for the first 6 hours following termination of tag releases, and then declined rapidly to approximately 5 percent for the next 10 hours. Mean daily tag recovery data presented in Table 4-8 indicate an exponential decrease in reimpingement as a function of time after tag release.

Total tag recovery (all colors) as a percent of the number of impinged white perch (Figure 4-4) indicates that the probability that any white perch in the impingement collection had been previously impinged varied from 0.0 to 0.74 depending on the time of day. Peaks in reimpingement generally occur at 10-12-hour intervals, suggesting a relationship between tidal flow and reimpingement (Figure 4-4). Reimpingement gradually increases as the tide is flooding, peaks shortly after high slack, and gradually declines as the tide ebbs. At low slack there may be another smaller peak, perhaps representing immediate capture of tagged fish reimpinged when there was no tidal flow away from the intake structure. Reimpingement peaks during the day are greater than those at night, indicating a lag in reimpingement following the diel impingement pattern. Based on the results of this survey, maximum recirculation of impinged fish can be expected during daylight on a flood tide under continuous screenwash.

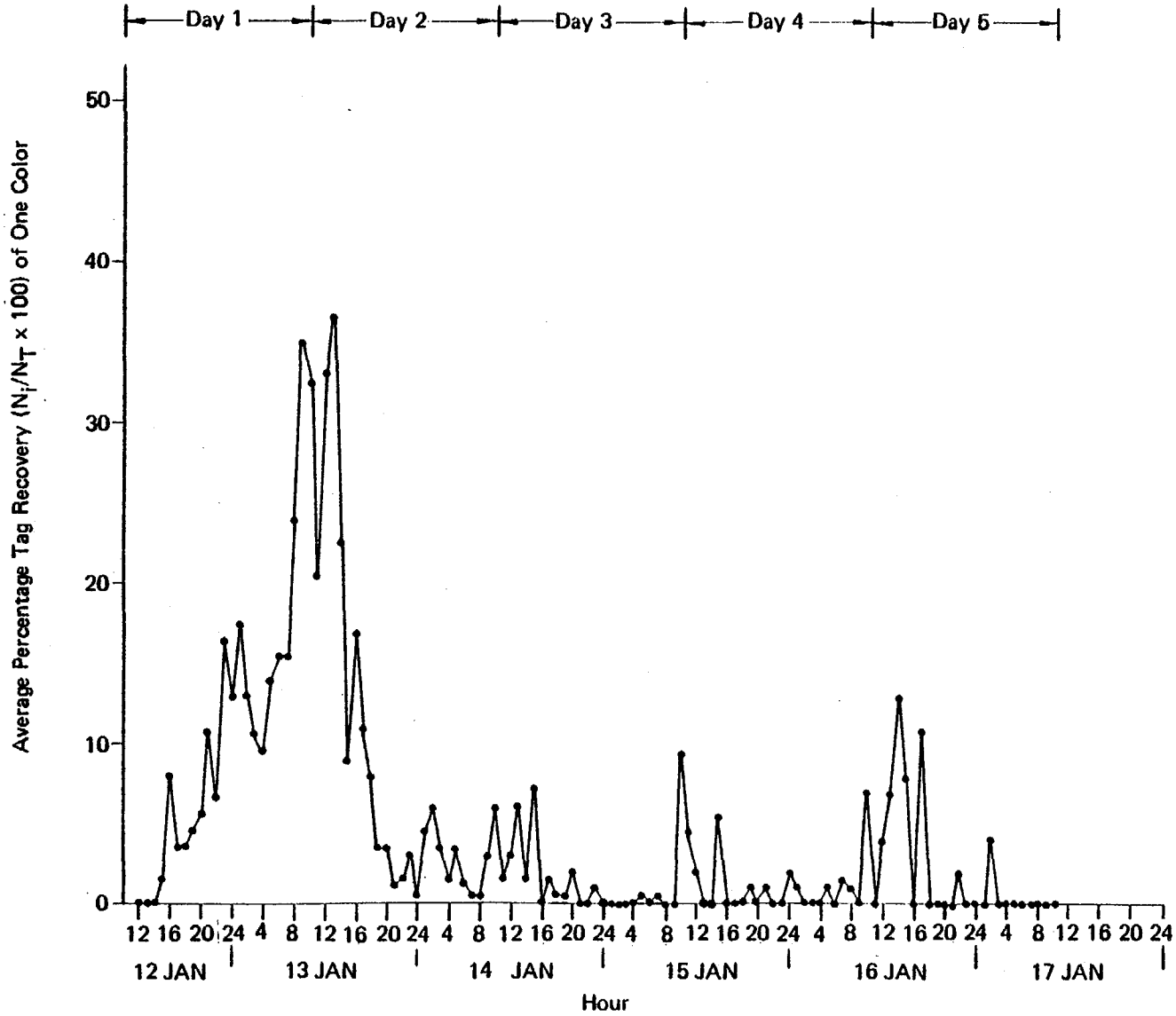


Figure 4-3. Average temporal fluctuation in reimpingement probability at the Bowline Point plant Unit 1 for a single day of release (one color tag) 12-17 January 1977.

TABLE 4-8 MEAN DAILY TAG RECOVERY IN PERCENTAGE OF DAILY IMPINGEMENT OF WHITE PERCH AT BOWLINE POINT PLANT UNIT 1

Day of Release	Color	24-Hour Interval 1	2	3	4	5	6	7
1	Purple	15	5	1	1	2	0.6	0.5
2	Blue		19	6	2	1	0.3	0.2
3	Orange			17	4	0.8	0.3	0.4
4	Yellow				15	9	2	0.2
5	Green					10	4	0.7

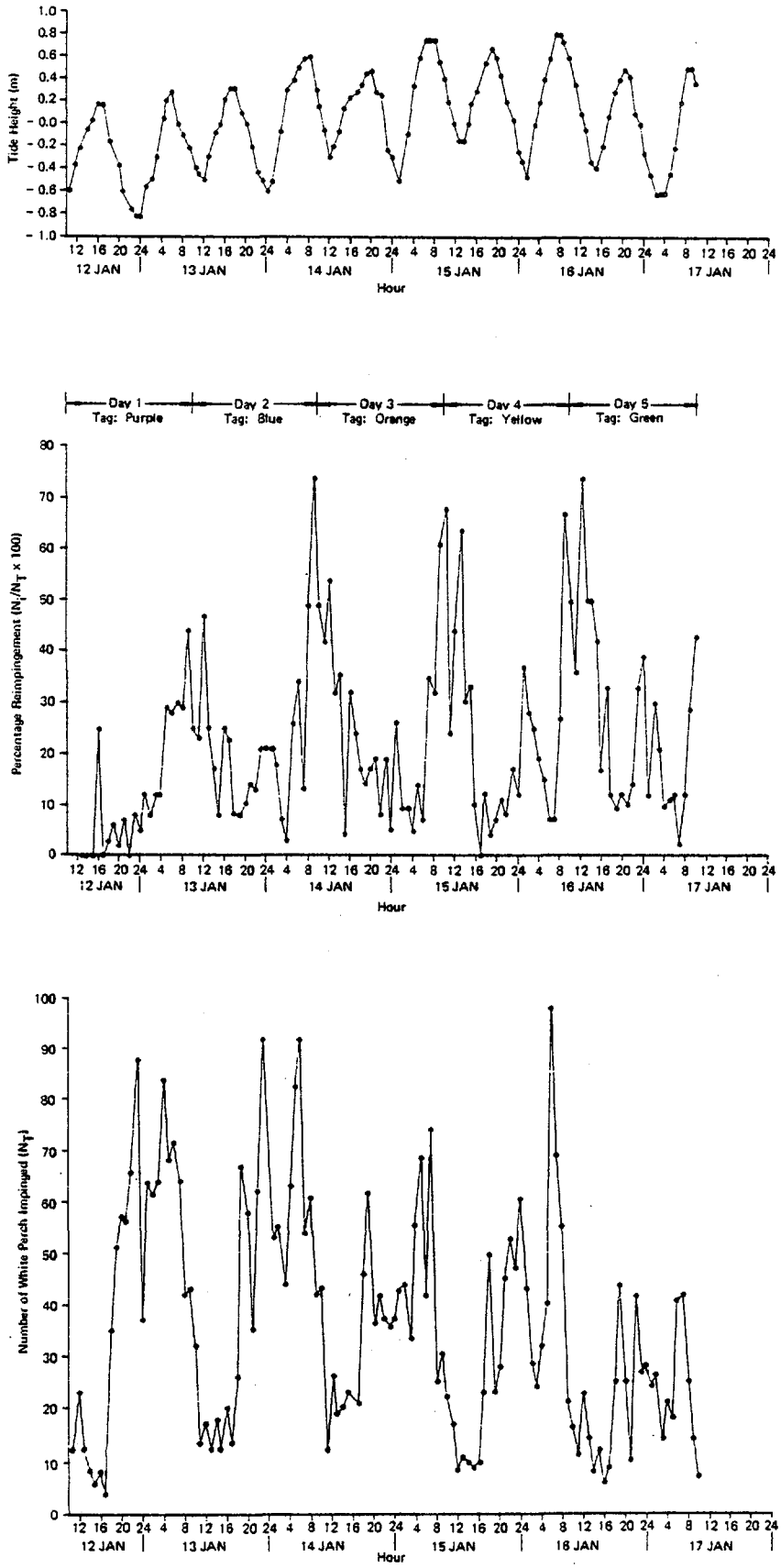


Figure 4-4. Total tag recovery at Bowline Point plant Unit 1 intake as a percentage of impingement abundance of white perch 12-17 January 1977.

4.4 CONDITION EFFECTS ON RECAPTURE

Of the 3,334 fish released alive, 25.1 percent were recaptured (Table 4-9). However, only 2.4 percent of the 167 dead fish released were recovered. Dead fish may have been trapped under the ice cover of the pond; when the ice began to thaw, dead fish were again observed in impingement collections. Gulls were also observed feeding on dead fish floating on the surface of the pond. Tagging mortality studies indicated that survival (Table 4-10) of tagged fish was significantly lower than control (non-tagged fish). Consequently, some of the tagged fish released alive may have subsequently died and been subject to the same factors that may have decreased reimpingement of dead fish.

TABLE 4-9 SUMMARY OF RELEASE VERSUS RECAPTURE CONDITION FOR WHITE PERCH REIMPINGED AT UNIT 1, 12-17 JANUARY 1977

Initial Release Condition	Number Released	Recapture Condition		Total No. Recaptured	Percentage of Release Condition Recaptured
		Alive	Dead		
Alive	3,334	798	40	838	25.1
Dead	167	--	4	4	2.4
	3,501			842	24.0

TABLE 4-10 PERCENTAGE SURVIVAL OF TAGGED VERSUS NONTAGGED WHITE PERCH[a]

	Number	Percentage Survival			
		36 hrs	60 hrs	96 hrs	144 hrs
Alive white perch					
Tagged	172	86.6	77.3	57.0	52.9
Nontagged	174	94.8	90.8	81.0	78.2

(a) Fish collected under continuous low screenwash 8-9 January 1977.

REFERENCES

Ecological Analysts, Inc. (EA). 1976. Bowline Point Generating Station. Impingement Recirculation and Survival Studies November 1975 - April 1976. Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engineers (LMS). 1974. 1973 Hudson River Aquatic Ecology Studies - Bowline Point and Lovett Generating Stations. Vol. V. Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engineers (LMS). 1975. 1974 Hudson River Aquatic Ecology Studies - Bowline Point and Lovett Generating Stations. Vol. II. Orange and Rockland Utilities, Inc.

Lawler, Matusky & Skelly Engineers (LMS). 1976. 1975 Hudson River Aquatic Ecology Studies - Bowline Point and Lovett Generating Stations. Vol. I. Orange and Rockland Utilities, Inc.

Texas Instruments, Inc. (TI). 1975. Indian Point Impingement Study Report for the Period 1 January 1974 through 31 December 1974. Consolidated Edison Company of New York, Inc.

Report ORU71G3

BOWLINE POINT GENERATING STATION
ENTRAINMENT SURVIVAL
1977 ANNUAL INTERPRETIVE REPORT

Prepared for:

Orange and Rockland Utilities, Inc.
One Blue Hill Plaza
Pearl River, New York 10965

Prepared by:

Ecological Analysts, Inc.
R.D. 2 Goshen Turnpike
Middletown, New York 10940

August 1978

CONTENTS

		Page
1.	INTRODUCTION	1-1
	1.1 SITE DESCRIPTION	1-1
	1.2 THE POWER PLANT	1-1
	1.3 THE STUDY OBJECTIVE	1-4
2.	SUMMARY	2-1
3.	METHODS	3-1
	3.1 FIELD METHODOLOGY	3-1
	3.1.1 Viability Studies	3-1
	3.1.2 Direct Release Studies	3-9
	3.2 ANALYTICAL METHODOLOGY	3-13
4.	RESULTS AND DISCUSSION	4-1
	4.1 ABUNDANCE, SEASONAL DISTRIBUTION, AND LENGTH FREQUENCY OF ORGANISMS COLLECTED	4-1
	4.2 INTAKE AND DISCHARGE SURVIVAL	4-16
	4.2.1 Initial and 96-Hour Survival	4-16
	4.2.2 Latent Survival	4-20
	4.3 MECHANICAL AND THERMAL EFFECTS ON SURVIVAL	4-27
	4.3.1 Mechanical Effects	4-27
	4.3.2 Thermal Effects	4-27
	4.4 LENGTH ANALYSIS OF STRIPED BASS SURVIVAL	4-32
	4.5 ENTRAINMENT SURVIVAL	4-32
	4.6 DIRECT RELEASE SURVIVAL STUDIES	4-39
REFERENCES		

LIST OF FIGURES

Number	Title
1-1	Diagram of Bowline Point plant site.
3-1	Design of the larval collection tables used in the Bowline Point plant entrainment survival studies beginning in June 1977.
3-2	Design of the ambient water injection system.
3-3	Work flow diagram of ichthyoplankton survival determination.
3-4	Location of release apparatus at intake for direct release studies.
3-5	Schematic diagram of the hose injector system for release of intake control larvae.
4-1	Seasonal distribution of ichthyoplankton collected for survival study at the Bowline Point plant circulating water discharge, 1977.
4-2	Water temperature measured at the Bowline Point plant intake, 1977.
4-3	Water conductivity measured at the Bowline Point plant intake, 1977.
4-4	Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Bowline Point plant, 1977.
4-5	Latent survival of Atlantic tomcod yolk-sac larvae collected at the Bowline Point plant, 1977.
4-6	Latent survival of striped bass juveniles collected at the intake and discharge of the Bowline Point plant, 1977.
4-7	Latent survival of clupeid post-yolk-sac larvae collected at the Bowline Point plant, 1977.
4-8	Latent survival by length interval of striped bass collected at the Bowline Point plant, 1977.

LIST OF TABLES

Number	Title
1-1	Plant design data for each unit of the Bowline Point plant.
1-2	Total cooling water flow, intake and discharge pipe velocities, and intake approach velocities for various pump operating modes, Bowline Point plant.
1-3	Calculated maximum time-temperature regimes of exposure during transit through the Bowline Point plant Unit 2 cooling-water system.
3-1	Sampling gear used to collect ichthyoplankton for entrainment viability at the Bowline Point plant.
3-2	Sampling procedure summary for ichthyoplankton viability collections.
3-3	Summary of entrainment viability sampling effort during 1977 at the Bowline Point plant.
3-4	Water chemistry collection apparatus used at the Bowline Point plant during 1977.
3-5	List of primary literature sources used in laboratory identification of ichthyoplankton.
4-1	Total number of each taxon and life stage collected for survival determinations at each station sampled at the Bowline Point plant, 1977.
4-2	Taxa nomenclature.
4-3	Total number of each taxon and life stage collected for survival determinations at the Bowline Point plant, 1977.
4-4	Daily water temperature, dissolved oxygen, and pH measured at the Bowline Point plant intake, 1977.
4-5	Length-frequency distribution by sampling week of striped bass collected at the intake and discharge of the Bowline Point plant, 1977.
4-6	Length-frequency distribution by sampling week of white perch collected at the intake and discharge of the Bowline Point plant, 1977.
4-7	Length-frequency distribution by sampling week of Atlantic tomcod collected at the intake and discharge of the Bowline Point plant, 1977.

LIST OF TABLES (CONT.)

Number	Title
4-8	Length-frequency distribution by sampling week of bay anchovy collected at the intake and discharge of the Bowline Point plant, 1977.
4-9	Length-frequency distribution by sampling week of bay anchovy collected at the intake and discharge of the Bowline Point plant, 1977.
4-10	Mean initial and 96-hour survival of each taxon and life stage at the Bowline Point plant intake and discharge, 1977.
4-11	Initial and 96-hour survival of ichthyoplankton classified as live, collected at the intake and discharge of the Bowline Point plant in 1977.
4-12	Latent survival of larval and juvenile fishes collected at the intake and discharge during entrainment survival sampling at the Bowline Point plant, 1977.
4-13	Latent survival of live larval and juvenile fishes collected at the intake and discharge during entrainment survival sampling at the Bowline Point plant, 1977.
4-14	Latent survival of stunned larval and juvenile fishes collected at the intake and discharge during entrainment survival sampling at the Bowline Point plant, 1977.
4-15	Survival of ichthyoplankton at the intake and discharge of the Bowline Point plant as a function of temperature and circulator pump operation, 1977.
4-16	Survival of ichthyoplankton at the intake and discharge of the Bowline Point plant as a function of temperature exposure, 1977.
4-17	Initial survival of striped bass collected at the Bowline Point plant intake and discharge of Unit 1 as a function of length.
4-18	Latent survival of striped bass collected at the Bowline Point plant in 1977, as a function of species length (all life stages combined).
4-19	Entrainment survival of ichthyoplankton at the Bowline Point plant, 1977.
4-20	Entrainment survival from nonthermal effects at the Bowline Point plant, 1975-1977.

LIST OF TABLES (CONT.)

Number	Title
4-21	Mean initial and 96-hour proportions surviving of striped bass larvae released at the intake and collected at the discharge of the Bowline Point plant with associated estimates of through-plant percent survival, 1977.
4-22	Summary of survival data for holding controls during direct release studies at the Bowline Point plant, 1977.
4-23	Expected and actual number of striped bass larvae recovered at the Bowline Point plant discharge following release at the intake of an estimated population size.
4-24	Background numbers of river larvae collected during direct release studies.

CHAPTER 1: INTRODUCTION

Conventional power plants using a once-through cooling water system require the availability of a large body of water to supply steam-cooling condensers and auxiliary systems. Aquatic organisms present that are small enough to pass through the 9.5-mm bar mesh screens at the plant intake structure are entrained and pumped through the condenser system. This process exposes these planktonic organisms to abrupt changes in temperature, hydrostatic pressure, mechanical buffeting, and velocity shear forces. Among the organisms subject to entrainment are the early life stages (larvae and juveniles) of fish.

1.1 SITE DESCRIPTION

The Bowline Point Generating Station is situated on the west bank of the Hudson River estuary, approximately 60 km (37.5 mi) north of the southern tip of Manhattan. The river reaches its widest extent in this area and is characterized by a relatively narrow shallow channel with wide shoal areas bordering both shores.

Flow rates at this location, as in the lower estuary in general, are controlled predominantly by the tides. The tidal flow has an average rate of 5,000 m^3/sec in comparison to a freshwater discharge rate which ranges from a monthly mean of about 175 m^3/sec during summer drought to 1,750 m^3/sec during spring freshet. Salinity in the northern end of Haverstraw Bay ranges from that characteristic of freshwater up to 25 percent of that characteristic of seawater. Seasonal trends are primarily controlled by the amount of freshwater discharge from the watershed. During periods of low runoff, however, the salinity in the vicinity of Bowline Point may fluctuate rapidly as a function of tidal stage and height.

Water for the condenser cooling-water system of the power plant is withdrawn from a small embayment of the estuary known as Bowline Pond and returned directly to the Hudson River through an offshore jet diffuser (Figure 1-1). Bowline Pond has a surface area of 490,000 m^2 and a volume of about 1,700,000 m^3. Pond water exchanges with river water through a small inlet, which is about 60 m wide and has a maximum depth of 3-4 m. The maximum depth in the pond is 12-15 m. Because of its physical connection with the estuary, the pond is also subject to salinity intrusion.

1.2 THE POWER PLANT

The Bowline Point Generating Station consists of two nearly identical oil-fired units. Unit 1 and Unit 2 began operation in September 1972 and May 1974, respectively. Each unit has a maximum generating capacity of 600 MW(e), and a maximum condenser cooling-water flow of 24.2 m^3/sec (384,000 gpm). Plant design characteristics are summarized in Table 1-1.

The cooling-water circulating systems of Units 1 and 2 are completely separate. Each system incorporates standard bar racks and 9.5-mm mesh vertical traveling screens for removal of debris at the intake. Cooling water is discharged through a submerged jet diffuser about 400 m from the river shoreline. Each unit contains three circulating water pumps which can be operated

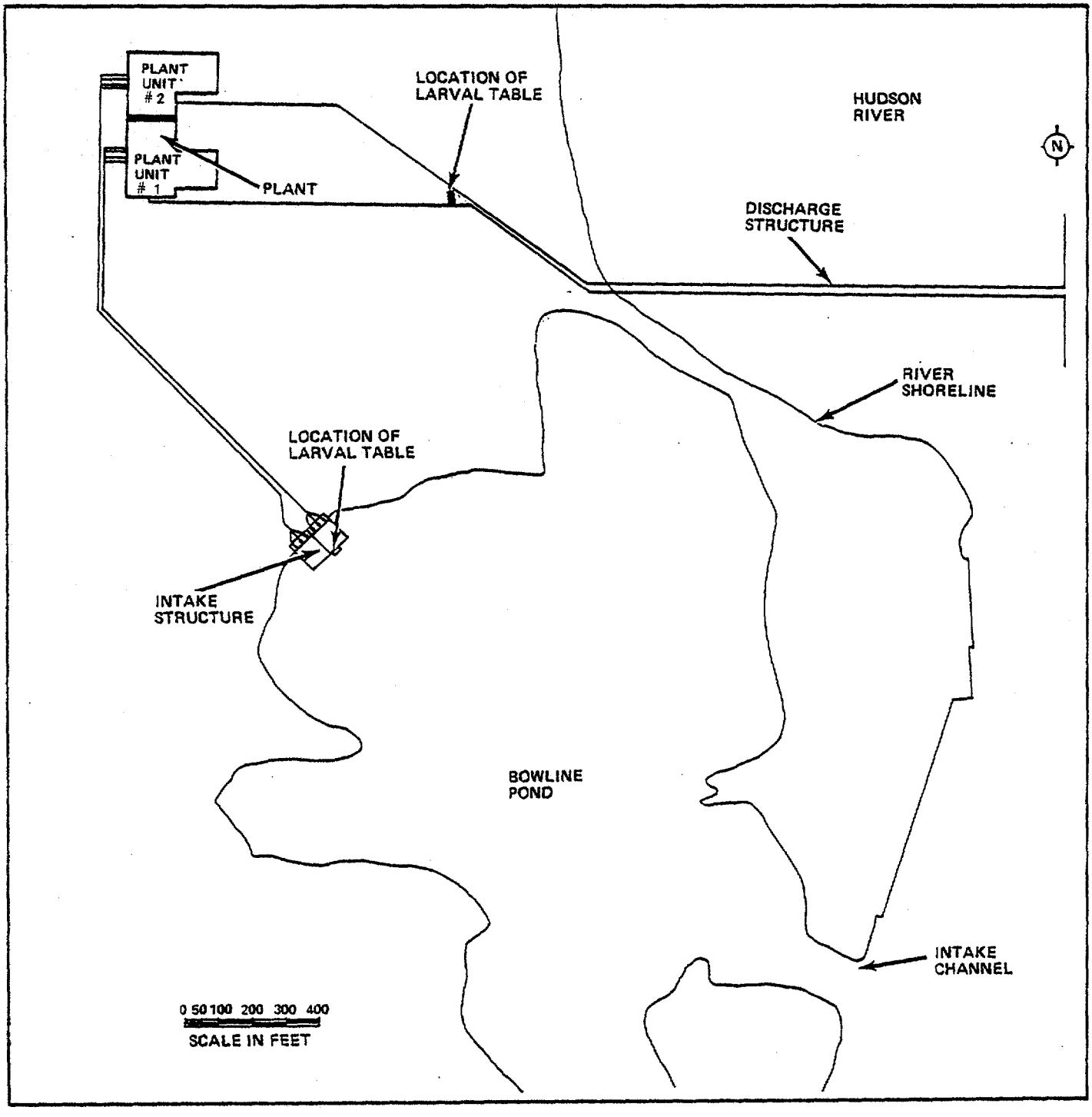


Figure 1-1. Diagram of Bowline Point plant site.

TABLE 1-1 PLANT DESIGN DATA FOR EACH UNIT OF THE BOWLINE POINT PLANT

Generator Characteristics	
Maximum generating capacity	620 MW(e)
Cooling water flow rate:	
Condenser (maximum)	23.7 m^3/sec (375,000 gpm)
Service	0.5 m^3/sec (8,500 gpm)
Intake Characteristics	
Maximum approach velocity to screens	0.23 m/sec (0.77 fps)
Pipe diameter from intake to condenser	3.2 m (10.5 ft)
Length of intake tunnel:	
Unit 1	400 m (1,310 ft)
Unit 2	470 m (1,540 ft)
Tunnel velocity (maximum)	3 m/sec (10 fps)
Discharge Characteristics	
Total length of discharge tunnel:	
Unit 1	860 m (2,820 ft)
Unit 2	875 m (2,870 ft)
Pipe diameter from condenser to discharge ports	3.2 m (10.5 ft)
Tunnel velocity (maximum)	3 m/sec (10 fps)
Length of diffuser	67 m (220 ft)
Number of diffuser ports	8
Initial jet velocity	4.6 m/sec (15 fps)

individually or in combination at either full or intermediate throttled flow. Circulating water flow and approach velocities at the bar racks are listed in Table 1-2 for each mode of pump operation. During 1977, the plants were normally operated in one of two pumping modes: two pumps throttled (370×10^6 gpd), or two pumps full (455×10^6 gpd).

Temperature elevations in the circulating water system are a function of generating load and coolant flow. For a given rate of heat rejection, an increase in cooling-water flow will reduce the delta-T to which the entrained organism is exposed, and decrease the duration of exposure (i.e., transit time through the system). Calculated maximum temperature/time regimes of exposure for standard pumping modes at Units 1 and 2 are presented in Table 1-3. In practice, electrical output required from Bowline Point varies depending upon electrical demand.

1.3 THE STUDY OBJECTIVE

The objective of the research program described in this annual report was to determine the effect of the condenser cooling water system at the Bowline Point plant on the survival of entrained Hudson River ichthyoplankton. These studies were a continuation of earlier work performed by Ecological Analysts (1976, 1977a) and were designed to determine survival shortly after collection (initial survival) and over a period of 4 days following collection to assess any latent entrainment effects. The effect of thermal exposure during entrainment was addressed by observing survival as a function of plant discharge temperature and by relating field observations to thermal relationships observed in laboratory experiments. The mechanical effect of the entrainment process was investigated by examining through-plant survival at discharge temperatures well below laboratory thermal tolerance limits.

These studies focused on the early developmental stages of striped bass (*Morone saxatilis*), white perch (*Morone americana*), Atlantic tomcod (*Microgadus tomcod*), members of the clupeid family (alewife and blueback herring), and the bay anchovy (*Anchoa mitchilli*). The early life stages of other taxa collected and studied included members of the family Centrarchidae, tessellated darter (*Etheostoma olmstedi*), rainbow smelt (*Osmerus mordax*), winter flounder (*Pseudopleuronectes americanus*), American eel (*Anguilla rostrata*), and hogchoker (*Trinectes maculatus*), as well as American shad (*Alosa sapidissima*), northern pipefish (*Syngnathus fuscus*), and silversides (*Menidia* spp.).

TABLE 1-2 TOTAL COOLING WATER FLOW, INTAKE AND DISCHARGE PIPE VELOCITIES, AND INTAKE APPROACH VELOCITIES FOR VARIOUS PUMP OPERATING MODES, BOWLINE POINT PLANT

Number of Pumps Operating	Total Flow at Mean Water Elevation m^3/sec (gpm)	Intake and Discharge Pipe Velocity m/sec (fps)	Intake Approach Velocity m/sec (fps)
3	24.2 (384,000)	3.02 (9.91)	0.23 (0.77)
2	20.0 (316,000)	2.50 (8.20)	0.18 (0.59)
1	11.7 (184,000)	1.46 (4.79)	0.11 (0.36)
2 (throttled)	16.2 (257,000)	2.02 (6.63)	0.15 (0.49)

TABLE 1-3 CALCULATED MAXIMUM TIME-TEMPERATURE REGIMES OF EXPOSURE DURING TRANSIT THROUGH THE BOWLINE POINT PLANT UNIT 2 COOLING-WATER SYSTEM

Number of Pumps Operating	System Section	Transit Time τ (min)	ΔT (C)	$\int_0^\tau \Delta T\, dt$ (C-min)
3	Intake - condenser feed	2.6	0.0	--
	Condenser feed - effluence	5.4	8.3	44.8
2	Intake - condenser feed	3.1	0.0	--
	Condenser feed - effluence	6.5	9.8	63.7
1	Intake - condenser feed	5.4	0.0	--
	Condenser feed - effluence	11.2	16.8	188.2
2 (throttled)	Intake - condenser feed	3.9	0.0	--
	Condenser feed - effluence	8.1	12.1	98.0

CHAPTER 2: SUMMARY

Striped bass, white perch, Atlantic tomcod, bay anchovy, and clupeids (alewife and blueback herring) were the most abundant taxa collected at the Bowline Point plant during survival studies. Post-yolk-sac larvae were caught in higher numbers than the other life stages for all taxa except Atlantic tomcod (primarily yolk-sac stage).

Seasonal distributions of ichthyoplankton collected during the summer months more closely resembled those of 1975 than 1976 when peak numbers were collected somewhat later in the season. Peak numbers were observed in mid-March for Atlantic tomcod. Clupeid larvae were collected in peak numbers in early June, as were striped bass and white perch. Bay anchovies were most abundant during the first 2 weeks of July.

Length measurements were made on all taxa collected. Weekly length frequencies for the five major taxa were generally similar at intake and discharge stations.

Initial survival of species collected at the plant intake (sampling controls) was consistent with that measured in the 1975 and 1976 survival studies (Ecological Analysts 1976, 1977a). Control survival was generally higher for juveniles than for other life stages.

Initial survival at the discharge stations was high for most species and life stages. The similarity of the intake and discharge latent survival curves indicated that most of the latent mortality in these studies resulted from stress incurred during sample collection, transfer, and holding. No significant effects of thermal exposure on survival were observed at discharge temperatures up to 33.0 C.

The mechanical effects of entrainment were determined from survival samples collected in the absence of thermal loading and for samples collected at temperatures below laboratory determined thermal tolerance limits of the species. Survival of striped bass larvae collected at Unit 2 discharge (0.71) was nearly identical to that observed at Unit 1 (0.72) at temperatures less than 30.0 C. Survival of Atlantic tomcod larvae and striped bass larvae was high for organisms collected at each of the three possible circulating water pump operating modes at the plant. Lowest survival for striped bass larvae was observed when the circulating system was operated at the lowest flow.

Intake and discharge survival of striped bass was examined in relation to fish length. Initial survival was high (64-100 percent) for all length intervals at both the intake and discharge, with no pattern below 15-18 mm. Initial survival of discharge and control fish above 18.0 mm in length was 100 percent. Latent survival was also high for all length intervals with no significant difference between intake and discharge stations.

Entrainment survival estimates at discharge temperatures below 30 C for the 1977 sampling season at Bowline Point were 97, 62, and 51 percent for striped bass, white perch, and clupeid larvae, respectively. Entrainment survival estimates for striped bass and white perch larvae were lower (41 and 48 percent, respectively) at temperatures between 33 and 36 C. Sample sizes were

too small to estimate survival of clupeids above 30 C. Survival of Atlantic tomcod yolk-sac larvae and striped bass juveniles was estimated at 84 (5.5-13.9 C) and 90 (below 33 C) percent, respectively.

CHAPTER 3: METHODS

3.1 FIELD METHODOLOGY

3.1.1 Viability Studies

Ichthyoplankton entrainment survival sampling was performed at the intake and discharge of the Bowline Point plant circulating water system during 1975, 1976, and 1977 (Tables 3-1 and 3-2). Sampling depth was selected based on apparent depth distribution identified in net abundance samples collected at the Unit 1 intake and available life history information for the most abundant species. Samples were collected at the intake from the bottom of the water column in front of the Unit 1 trash racks (2 March, 7-18 March) and simultaneously from the middle and bottom depths from 3 June to 2 July. The middle depth was sampled exclusively from 5 to 15 July. At the discharge, samples were collected from the standpipe of both Unit 1 and Unit 2. The discharge of Unit 2 was sampled on 2 March and 7-18 March. The discharge of Unit 1 was the primary sampling station throughout the summer sampling season (1 June - 15 July), but the Unit 2 discharge was also sampled during the period 14-17 June. Unit 2 was not generating power at the time, and sampling was conducted primarily to gather additional information on the mechanical effects of plant entrainment. After 17 June the circulating water pumps of Unit 2 were shut down and sampling continued exclusively at the discharge of Unit 1.

A total of 46 days of sampling occurred during spring and summer of 1977 (Table 3-3). Samples were collected at the Bowline Point plant during the season of peak larval abundance for Atlantic tomcod, striped bass, white perch, clupeids, and bay anchovy. Samples were taken five nights per week at an average rate of eight samples per station per night.

Samples were pumped into a larval collection table at the intake and discharge stations using a 4-in. diameter Homelite trash pump (Figure 3-1). Two such pumps were used in combination with the larval table at the intake from 3 June to 2 July. Because sampling-related mortality observed for bay anchovy during previous years was high, the sampling procedure was modified in an effort to enhance the control survival. During the bay anchovy effort the pumps were secured to a floating dock at the intake to minimize suction head at that station. The duration of each collection was 15 minutes, resulting in a mean sample volume of approximately 10 m^3 (range: 7.5-19.5 m^3) per pump. Water quality parameters (conductivity, dissolved oxygen, and pH) were measured (Table 3-4) at the initial, middle, and final samples of the sampling night at the intake. Temperature was measured at the intake and discharge stations during each sample.

Prior to the initiation of the summer sampling season (1 June - 15 July), an ambient water injection system was integrated into the basic larval table design at each station in an attempt to simulate the actual organism post-entrainment experience. Average transit time is 5-8 minutes from the condenser to the diffuser. Organisms collected at the discharge are exposed to elevated temperatures for up to 40 minutes in the larval table (sample duration + table drain time). The ambient water injection system was designed to mitigate the prolonged thermal exposure (time-temperature) in the col-

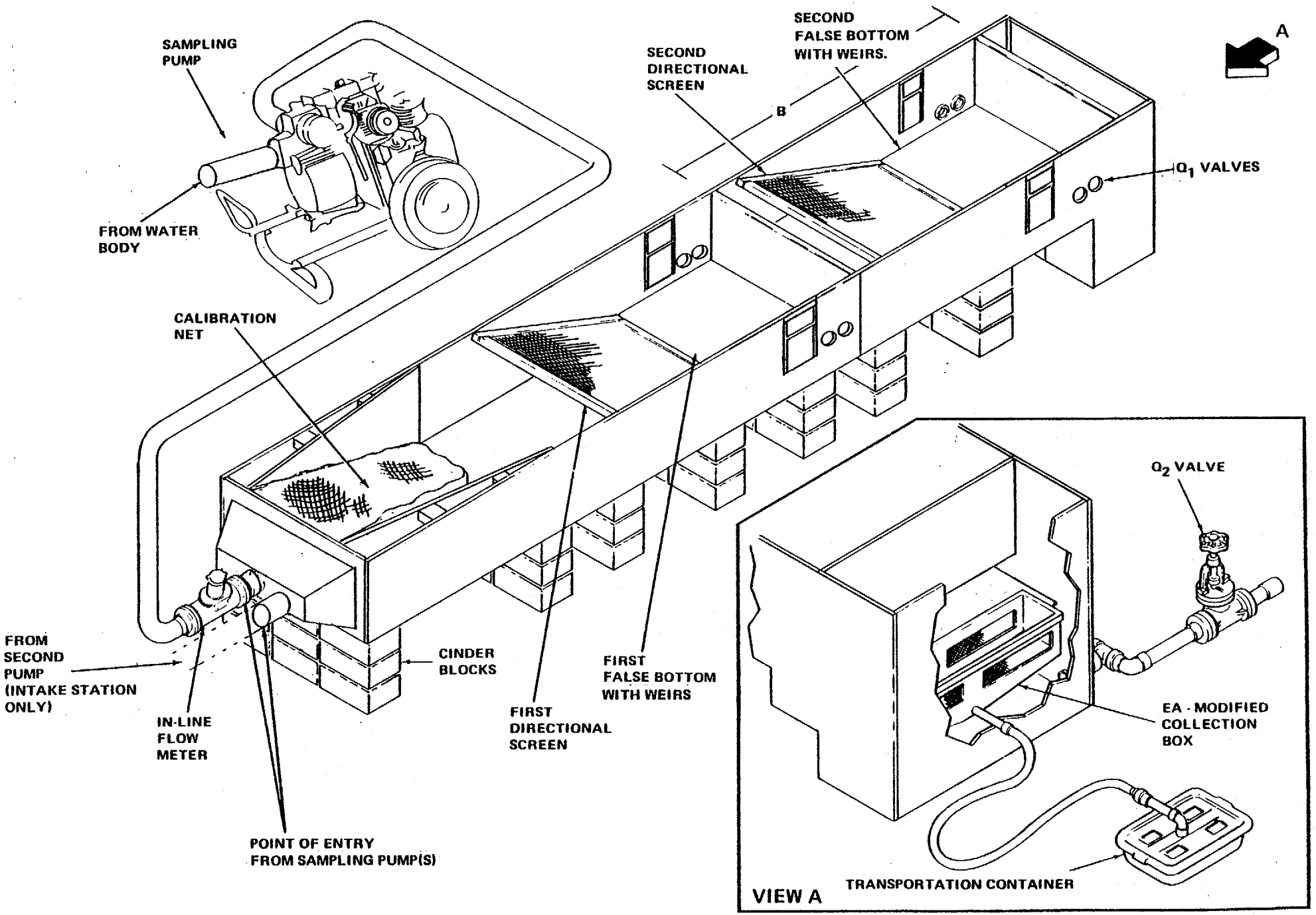


Figure 3-1. Design of the larval collection tables used in the Bowline Point plant entrainment survival studies beginning in June 1977.

TABLE 3-1 SAMPLING GEAR USED TO COLLECT ICHTHYOPLANKTON FOR ENTRAINMENT VIABILITY AT THE BOWLINE POINT PLANT

Year	Station[a]	Larval[b] Table Construction Material	Number of Screens	Mesh Size (µ)	Collection Box Type	Sample Container Type	Hose Type	Number of Pumps	Pump Type[c]	rpm	Method of Flow Determination	Flow (liters/minute)	Pump to Water Surface (m)	Hose Intake to Water Surface (m)	Hose Intake Orientation to Flow[d] (degrees)	Pump to Table (m)	Elevation of Hose Above Water Surface			
																	Before Pump		After Pump	
																	Max.	Min.	Max.	Min.
1975	Intake	Plywood	2	505	Lift basket	Open box	4-in. Flex	1	Midwhirl	--	0.9 m^3 overflow box	470-600	4-5	8	90	7.5	5.0	3.0	7.0	4.5
	D2	Plywood	2	505	Lift basket	Open box	4-in. Flex	1	Midwhirl	--	0.9 m^3 overflow box	470-600	3-5	2	90	7.5	8.0	5.0	7.5	5.0
1976 (winter)	Intake	Plywood	2	505	Lift basket	Open box	4-in. Flex	1	Midwhirl	800	Tableweir	250-1,420	4-5	8	90	7.5	5.0	3.0	7.0	4.5
	D2	Plywood	2	505	Lift basket	Open box	4-in. Flex	1	Midwhirl	800	Tableweir	375-1,300	3-5	2	90	7.5	8.0	5.0	7.5	5.0
1976 (summer)	Intake	Plywood	2	505	Siphon	Closed box	4-in. Flex	1	Midwhirl	800	Tableweir	250-1,420	4-5	8	90	7.5	5.0	3.0	7.0	4.5
	D2	Plywood	2	505	Siphon	Closed box	4-in. Flex	1	Midwhirl	800	Tableweir		3-5	2	90	7.5	8.0	5.0	7.5	5.0
1977	Intake	Aluminum	2	505	Siphon	Closed box	4-in. Flex	2	Homelite	1,700	Flowmeter	500-1,200	4-5	4-7	90	3.0-3.5	0.5	0.5	5.5	3.5
	D1	Aluminum	2	505	Siphon	Closed box	4-in. Flex	1	Homelite	1,700	Flowmeter	800-1,300	2-4	2	90	6.0	8.0	4.0	6.0	4.5
	D2	Aluminum	2	505	Siphon	Closed box	4-in. Flex	1	Homelite	1,700	Flowmeter	800-1,300	2-4	2	90	7.5	7.0	4.0	6.0	4.5

(a) D1, Unit 1 discharge; D2 Unit 2 discharge.
(b) Intake orifice 1.0 m above ground level.
(c) Midwhirl intake orifice 1.5 m above ground with vortex impeller; Homelite intake orifice 0.5 m above ground with open-face centrifugal impeller.
(d) Semi-rigid flex hose deployed perpendicular to current and swept in direction of current by the force of the water.

TABLE 3-2 SAMPLING PROCEDURE SUMMARY FOR ICHTHYOPLANKTON VIABILITY COLLECTIONS

Year	Station[a]	Sample Duration (min)	Table Drain Time (min)	Sample Vol (m^3)	No. of Table Weir Drains	No. of Q1 Drains	Q2 Flow Rate (liter/minute) Sample	Table Drain	Collection Box Drain	Method Collection Box Drain	Wash Water	Ambient Dilution System	Simultaneous Collection	Simultaneous Sort	Cod Ends
1975	Intake	15	30	7.0-9.0	1	0	600	600	600	Into cooler	Ambient				Runoff collection boxes
	BD2	15	30	7.0-9.0	1	0	600	600	600	Into cooler	Discharge				
1976[b]	Intake	15	30	3.5-21.0	1	0/2 pair[c]	600/76[c]	600/133[c]	600/38[c]	Cooler/ siphon	Ambient		✓	✓	Collection box
	BD2	15	30	5.5-19.5	1	0/2 pair[c]	600/76[c]	600/133[c]	600/38[c]	Cooler/ siphon	Discharge		✓	✓	Collection box
1977	Intake	15	30	7.5-18.0	1 pair	2 pair	76	133	38	Siphon	Ambient	✓	✓	✓	Collection box
	BD1	15	30	12.0-19.5	1 pair	2 pair	76	133	38	Siphon	Ambient	✓	✓	✓	Collection box
	BD2	15	30	12.0-19.5	1 pair	2 pair	76	133	38	Siphon	Ambient	✓	✓	✓	Collection box

(a) BD1, Unit 1 discharge; BD2, Unit 2 discharge.
(b) Where two entries occur in 1976, the first indicates procedure for winter season and the second indicates procedure for summer season after modification of larval table collection area.
(c) Modifications to table design for summer sampling incorporated decreases in Q2 drain rate and addition of Q1 drains.

TABLE 3-3 SUMMARY OF ENTRAINMENT VIABILITY SAMPLING EFFORT DURING 1977 AT THE BOWLINE POINT PLANT

Date	Number of Runs			Major Species
	Intake	Discharge I	Discharge II	
7 MAR	7		7	Atlantic tomcod
8 MAR	5		5	Atlantic tomcod
9 MAR	3		3	Atlantic tomcod
10 MAR	8		8	Atlantic tomcod
11 MAR	9		9	Atlantic tomcod
14 MAR	8		8	Atlantic tomcod
15 MAR	8		8	Atlantic tomcod
16 MAR	9		9	Atlantic tomcod
17 MAR	10		10	Atlantic tomcod
18 MAR	6		6	Atlantic tomcod
23 MAY	2	2		White perch/striped bass
24 MAY	5	5		White perch/striped bass
25 MAY	5	5		White perch/striped bass
1 JUN	5	5		White perch/striped bass
2 JUN	5	5		White perch/striped bass
3 JUN	7	7		White perch/striped bass
6 JUN	7	7		White perch/striped bass
7 JUN	8	8		White perch/striped bass
8 JUN	7	7		White perch/striped bass
9 JUN	8	8		White perch/striped bass
10 JUN	8	8		White perch/striped bass
11 JUN	8	8	8	White perch/striped bass
13 JUN	8	8		White perch/striped bass
14 JUN	8	8	8	White perch/striped bass
15 JUN	8	8		White perch/striped bass
16 JUN	8	8	8	White perch/striped bass
17 JUN	8	8	8	White perch/striped bass
20 JUN	6	6		White perch/striped bass
21 JUN	8	8	4	White perch/striped bass
22 JUN	7	6		White perch/striped bass
23 JUN	8	8	8	White perch/striped bass
24 JUN	8	8	8	White perch/striped bass
27 JUN	7	7		White perch/striped bass
28 JUN	7	7	7	White perch/striped bass
29 JUN	7	7		White perch/striped bass
30 JUN	7	7	7	White perch/striped bass
1 JUL	7	7		Bay anchovy
5 JUL	7	7	7	Bay anchovy
6 JUL	8	8		Bay anchovy
7 JUL	8	8	8	Bay anchovy
8 JUL	8	8	8	Bay anchovy
11 JUL	8	8		Bay anchovy
12 JUL	8	8		Bay anchovy
13 JUL	5	5		Bay anchovy
14 JUL	8	8		Bay anchovy
15 JUL	4	4		Bay anchovy

TABLE 3-4 WATER CHEMISTRY COLLECTION APPARATUS USED AT THE BOWLINE POINT PLANT DURING 1977

Parameter	Primary Meter	Alternate
Conductivity (μmho/cm)	Martek (MK V)	YSI, SCT (Model 33)
Dissolved oxygen (ppm)	Martek (MK V)	Winkler titration
pH	Martek (MK V)	Inst. Lab. Inc.-- Model 175

lection table and therefore to provide conditions more closely resembling those encountered by an organism during transit through the circulating water system and reentry into the river.

Ambient water was pumped from the river via a 2-in. diameter gas powered pump, through an in-line filter (397 μ) and injection system built into the false bottom of the section labeled "B" in Figure 3-1 and illustrated in Figure 3-2. The nozzles of the injection system were designed to diffuse the cooler ambient water into the warm discharge water at the rate of approximately 75 liter/minute. The ambient water pump was started at approximately the same time as the sampling pump and was allowed to run for the duration of the collection (15 minutes). This modification provided an effective reduction of 10-15 percent in the delta-T in the collection box.

After both intake and discharge tables were filled, sample collection began simultaneously by removing the 505-μ net (used to prevent contamination of the sample while the tables fill) from the head of the table. Following the 15-minute sample the pump was turned off and the table drained rapidly by opening the Q_1 and Q_2 valves (Figure 3-1, Table 3-3). The entire table was gently rinsed throughout the drain period. The drain rate was decreased when the water level reached the collection box and organisms collected in the table were drained into a detachable transportation container which also served as a sorting tray. The tables were thoroughly washed between collections to remove any remaining detritus or organisms. Table washes were collected and preserved with 10 percent buffered formalin for subsequent examination.

Intake and discharge samples were sorted simultaneously in an onsite laboratory. Larval and juvenile fish were classified as live, stunned, or dead, based upon the following criteria:

Live:	swimming vigorously, no orientation problems
Stunned:	swimming abnormally, struggling, no movement except in response to gentle probing
Dead:	no vital life signs; no body or opercular movement, no response to gentle probing.

Live and stunned fish were carefully transferred to separate holding containers (1-quart ball jars) with a large-bore glass pipette. A maximum of five larvae were placed in each container, which was aerated and maintained in an ambient water trough. Care was exercised to separate the very young larvae from the older larvae and juveniles to reduce the possibility of cannibalism. Dead specimens were preserved for later identification.* The duration of the sorting process varied depending on the amount of detritus and the number and age of the organisms. While this period generally ranged from 15 to 60 minutes, the average duration was 30 minutes.

* All sorted ichthyoplankton were preserved in 5 percent buffered formalin; residual detritus and invertebrates were preserved with 10 percent buffered formalin.

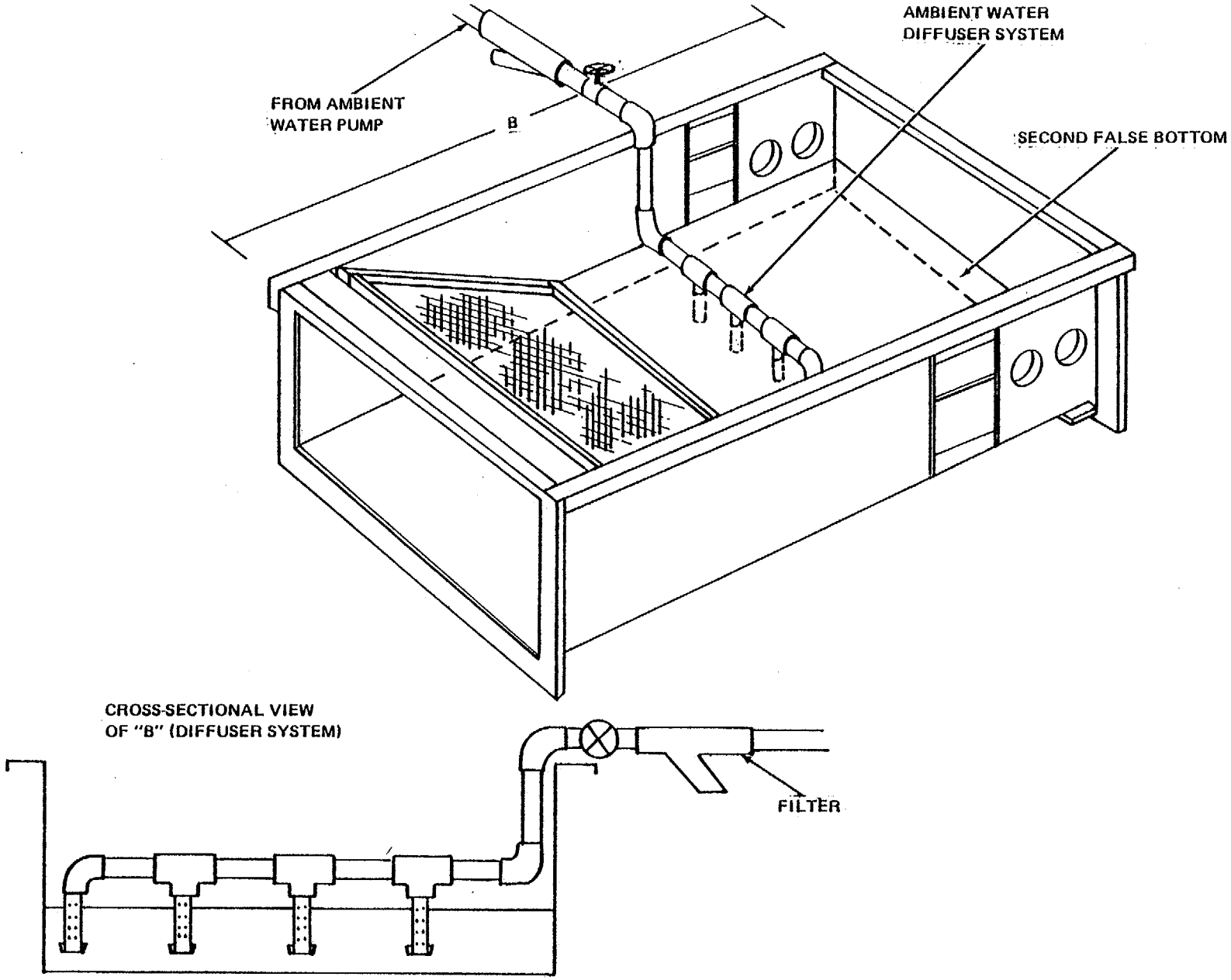


Figure 3-2. Design of the ambient water injection system (magnification of section "B", Figure 2.1-1).

Partial organisms were handled in the following manner: if approximately 50 percent or more of an organism was present, that organism was included in the initial dead count; less than 50 percent of an organism was not included in the analysis. These criteria were chosen as the most reasonable alternative because the precise origin of smaller fragments would be difficult to determine conclusively.

Live and stunned organisms from the initial sort were examined at 3, 6, 12, 24, 48, 72, and 96 hours after sample collection. Any dead organisms were removed from the holding jars and preserved in vials. All organisms remaining alive after 96 hours were also preserved. Species and life-stage determinations were facilitated by reference to the available literature (Table 3-5) and to a reference collection. Owing to the difficulty involved in differentiation of the early life stages of alewife and blueback herring, the two species have been grouped under the classification clupeids; all other members of the family Clupeidae were identified to species. Length measurements were performed on all species collected.

Quality assurance procedures in the laboratory consisted of a color-coded labeling system for jars and vials, records of the number of live and dead at each check time, and immediate checks of the sorted sample prior to preservation. The efficiency of sorting and the accuracy and consistency of species/life-stage identifications were also determined and documented. Organisms not found in the initial sort, or collected from the table washdown, were used to evaluate collection efficiency but were not entered in viability calculations. Proportion defective analysis was used to assure the quality level of organism identification. This is an acceptance sampling procedure which selects 7 out of 50 samples at random for rework. The procedure provides an average outgoing quality level (AOQL) of no more than 10 percent error. Quality and consistency of the survival studies were also assured by strict adherence to standard operating procedures. The general scheme for determining ichthyoplankton survival is presented in Figure 3-3.

3.1.2 Direct Release Studies

Groups of hatchery reared larvae were released in front of the cooling water intake at the Bowline Point plant Unit 1 and sampled at the discharge to evaluate survival through the plant under a controlled situation yielding larger sample sizes than standard viability sampling. Direct releases of striped bass were conducted on 8 days from 24 May to 24 June. Only one release was carried out on each sampling date.

All striped bass larvae used in the direct releases were hatched and reared in quarry water at the Texas Instruments' hatchery in Verplanck, New York. Larvae were transferred to Hudson River water 18-24 hours prior to release and fed live brine shrimp nauplii. Prior to release, fish were transferred from the flow-through holding facility to the release container located at water level in front of the intake. Larvae were released from the container by gravity flow via a 10-ft flexible tube attached to the bottom of the tank (Figure 3-4). The tank took approximately 3 minutes to drain and permitted release at middepth between the trash rack and the traveling screen.

A standard 15-minute viability sample (see Subsection 3.1.1) was initiated at the discharge 2 minutes after initiation of the release at the intake.

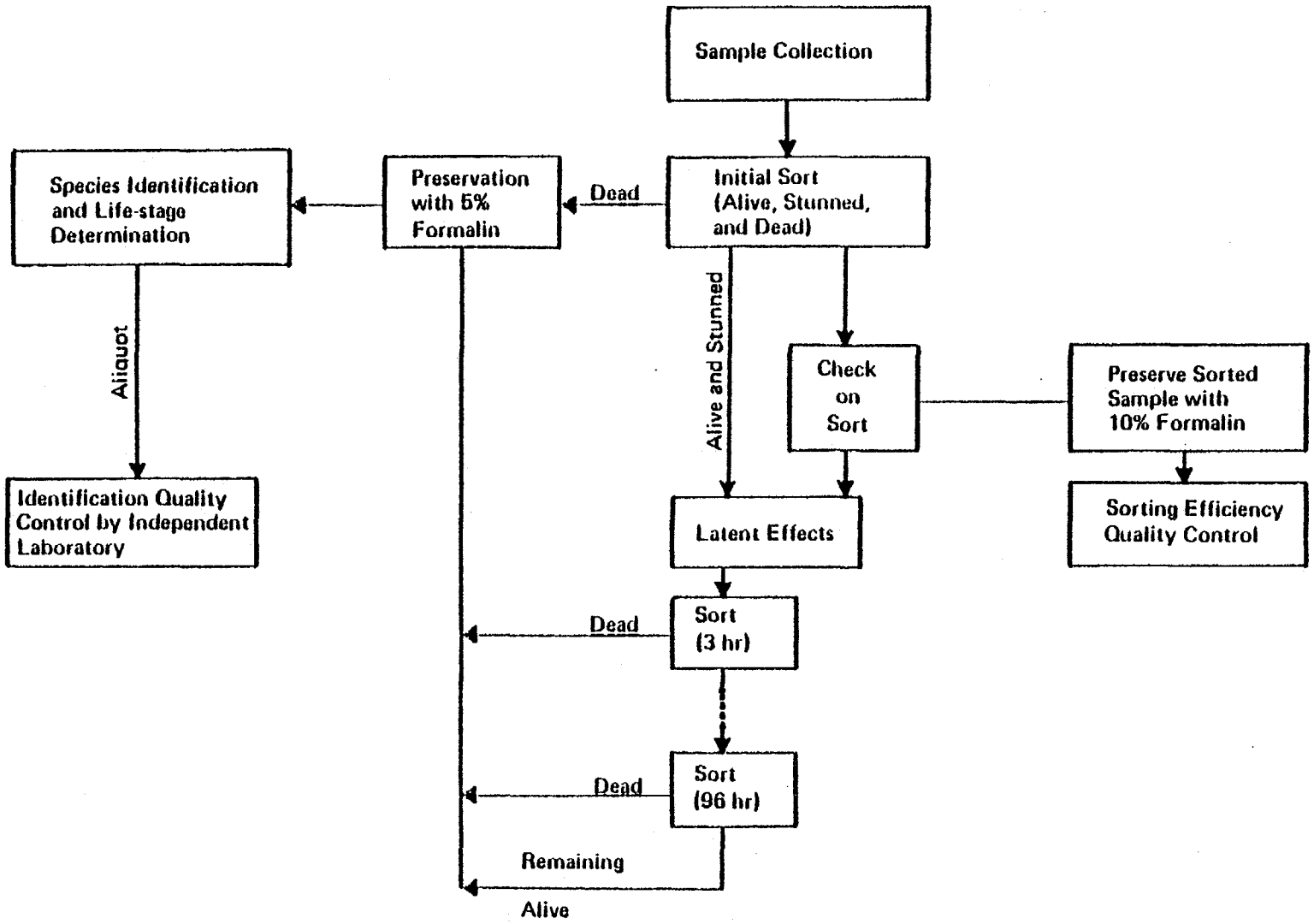


Figure 3-3. Work flow diagram of ichthyoplankton survival determination.

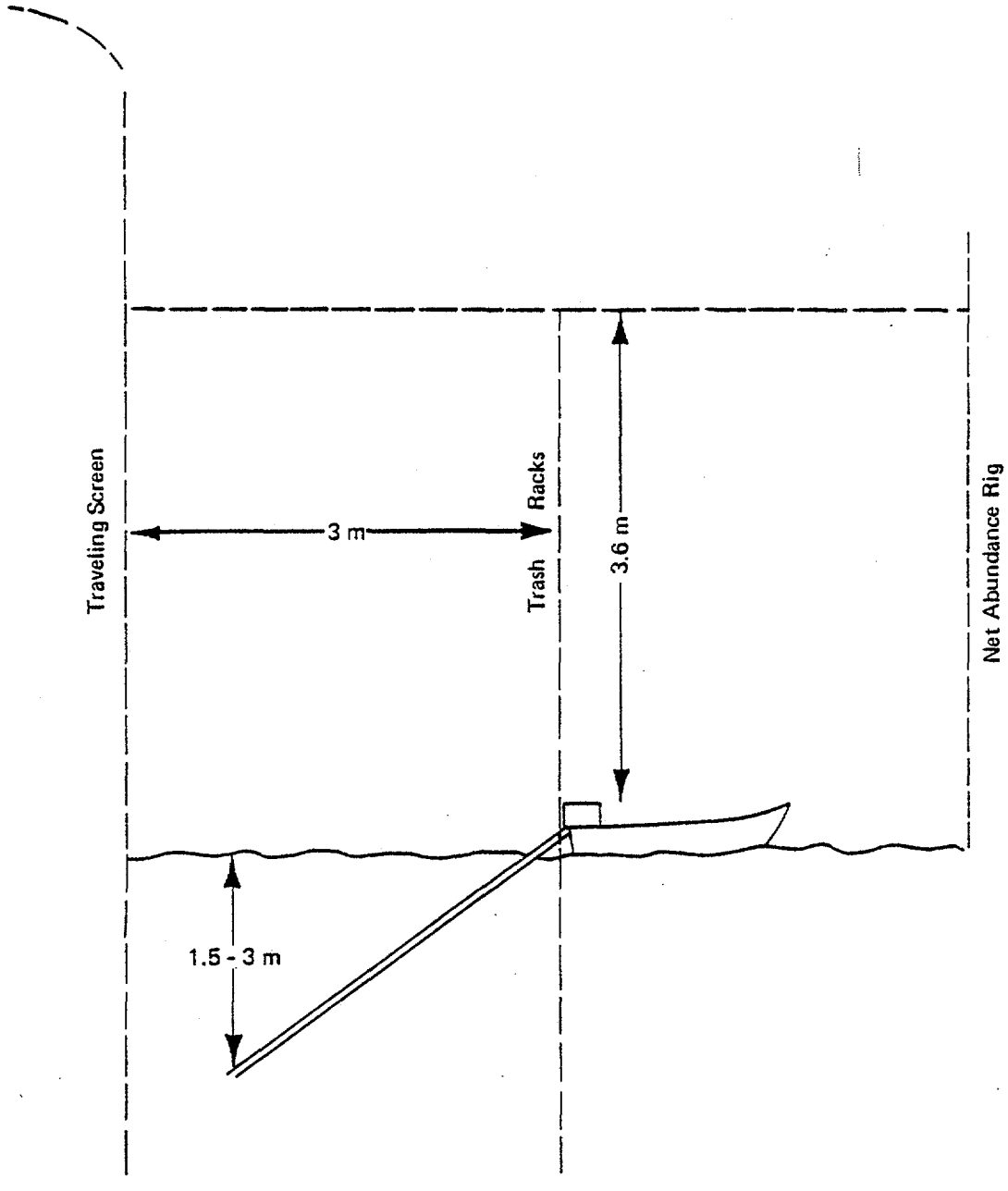


Figure 3-4. Location of release apparatus at intake for direct release studies.

TABLE 3-5 LIST OF PRIMARY LITERATURE SOURCES USED IN LABORATORY IDENTIFICATION OF ICHTHYOPLANKTON

Chambers et al. 1969
Cianci 1969
Mansueti and Hardy 1967
Scotton et al. 1973
Leim 1924
Lippson and Moran 1974
Hildebrand and Schroeder 1928
Bigelow and Schroeder 1953
Booth 1967
Mansueti 1958
Bayless 1972
Doroshev 1970
Rathjen and Miller 1957
Dovel and Edmonds 1971
Krester 1968
Bath 1974
Wang and Kernehan (in press)

Intake control samples were obtained by releasing approximately 100 larvae directly into the intake line of the sampling pump via a length of attached tubing (Figure 3-5). In order to quantify the number and condition of in situ (background) larvae in the sample, pre- (on all sampling dates after 6 June) and post-release samples were collected at the intake and discharge on each sample date. The collection gear, methodology, and sample processing for all samples were the same as those described in Subsection 3.1.1.

The population of striped bass larvae to be used for a single direct release was too large to permit an actual enumeration of individuals. A system for estimating the total number of organisms released based on aliquots was therefore developed and utilized for each release.

Two aliquots were removed from the holding tank (one from the front, the other from the back) on each estimation trial and the number of fish per aliquot counted. An average of eight trials (16 aliquots) was performed on the holding tank population to be released. The total number of larvae in the release was then estimated by converting the number of larvae in each aliquot to an estimate of the total population based on the aliquot volume to total tank volume ratio. The mean number of organisms released was then determined as the average of all population estimates. Despite every effort to obtain homogeneity in the holding facility, fish tended to "school" and sample population estimates exhibited a high degree of variation around the mean.

In estimating the population for the last four releases, the proportion dead (D_R) was also determined for each aliquot. This number was then used to adjust survival estimates to account for the number of dead collected which were dead at the time of the release (N_{DR}):

$$N_{DR} = N_T \times D_R$$
$$N_{TA} = N_T - N_{DR}$$
$$N_{DA} = N_D - N_{DR}$$

where

N_T = total number collected
N_D = total number dead at discharge
N_{DA} = adjusted number dead.
N_{TA} = adjusted total number

3.2 ANALYTICAL METHODOLOGY

Three calculations have been used in this study to evaluate survival of entrained organsisms: initial survival, 96 hour survival, and latent survival. The proportion surviving initially and at 96 hours was determined by dividing the number of individuals classified as live and stunned by the total number of organisms initially collected (live + stunned + dead). For subsequent analysis live and stunned organisms were grouped to avoid potential bias associated with the subjective stunned category. Since 10-15 percent of the larvae classifed as stunned survived through the entire 96-hour period of observation in the present study (Subsection 4.2.2) and in previous studies (Ecological Analysts 1976), including them in the dead category is considered inappropriate for these analyses. Calculations of proportion surviving based

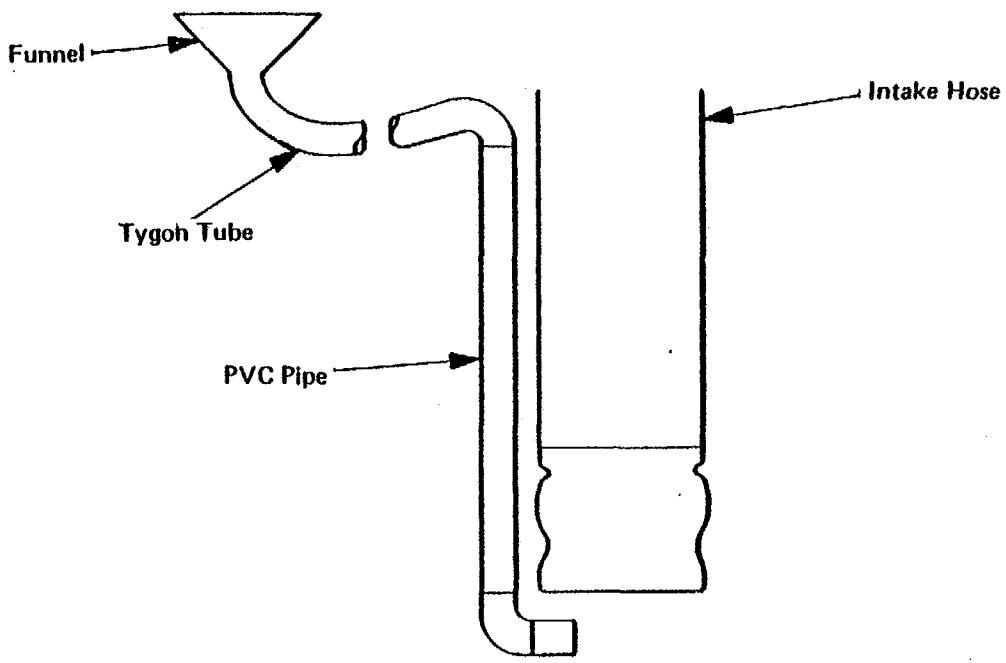


Figure 3-5. Schematic diagram of the hose injector system for release of intake control larvae.

on live (stunned excluded) and stunned (live excluded) have been included for completeness only.

While initial and 96-hour survival calculations are based on all organisms initially collected, latent survival at 96-hours accounts for only those organisms initially classified as live or stunned and monitored for survival during the 96-hour period subsequent to collection. Latent survival is therefore based on an initial proportion surviving of 1.0.

Comparisons of the proportion surviving were made by means of a z-test (for comparison of 2 proportions (Ostle and Mensing 1975) where,

$$z = \frac{P_I - P_D}{\left[\frac{P_I\,(1 - P_I)}{n_I} + \frac{P_D\,(1 - P_D)}{n_D}\right]^{\frac{1}{2}}}$$

and

P_I = proportion surviving at the intake
P_D = proportion surviving at the discharge
n = the number of organisms collected at the intake (I) or discharge (D).

CHAPTER 4: RESULTS AND DISCUSSION

4.1 NUMBERS, SEASONAL DISTRIBUTION, AND LENGTH FREQUENCY OF ORGANISMS COLLECTED

Striped bass, white perch, Atlantic tomcod, bay anchovy, and clupeids were the most abundant taxa collected during survival studies in 1977 (Table 4-1). For convenience, a list of common and scientific names has been included (Table 4-2). Total catch for all stations combined is shown in Table 4-3. Post-yolk-sac larvae were caught in larger numbers than the other life stages for all species except Atlantic tomcod, which were primarily in the yolk-sac stage.

The seasonal distribution of the five most abundant species collected at the discharge of Unit 1 for survival analysis is displayed in Figure 4-1 with mean intake and discharge water temperature. Ambient water temperature, dissolved oxygen, and pH measured at the Bowline Point intake over the entrainment survival sampling season are presented in Table 4-4. Seasonal trends in ambient water temperature (C) (Figure 4-2) and conductivity (μmho) (Figure 4-3) are typical of the freshwater saltwater transition zone of a temperate estuary.

Atlantic tomcod, which spawn in the Hudson River during the winter months, were collected during the second and third weeks in March. The highest collections occurred during the second week of sampling, at approximately the same time of peak occurrence in 1976. Ambient water temperatures during this period ranged from 4 to 6 C. Discharge temperatures did not exceed 17 C.

Members of the clupeid family (alewife, blueback herring, and American shad) spawn primarily in the freshwater regions of the river north of the Bowline Point site and are therefore not highly susceptible to entrainment at the Bowline Point plant. This results in the low numbers collected in survival samples during 1977 and in the previous 2 years of sampling effort.

Striped bass and white perch were collected concurrently with the clupeids. Peak numbers of these species appeared in survival collections during the first half of June when the ambient water temperature was 20-21 C and discharge temperatures ranged from 25 to 27 C. This compares closely with the temporal occurrence of striped bass and white perch in 1975 but is somewhat earlier than the peak occurrence in 1976. Juvenile striped bass and white perch were collected from mid-June to mid-July 1977 when ambient temperatures ranged from 21 to 27 C and discharge temperatures generally exceeded 30 C.

Bay anchovy spawn throughout the summer months in the more saline regions of the estuary. Most of the bay anchovy were collected in survival samples during the first two weeks in July. During this period intake temperature was 25-27 C and total discharge temperature varied between 32-35 C. This pattern of occurrence was similar to 1975. Peak numbers of this species, like those of striped bass and white perch, did not occur until later in the 1976 sampling season.

Length-frequency distributions for the five most abundant taxa collected at the intake and discharge are presented in Tables 4-5 through 4-9. Discharge

TABLE 4-1 TOTAL NUMBER OF EACH TAXON AND LIFE STAGE COLLECTED FOR SURVIVAL DETERMINATIONS AT EACH STATION SAMPLED AT THE BOWLINE POINT PLANT, 1977

Taxon	Intake			Discharge Unit 1[a]			Discharge Unit 2[b]		
	Larvae			Larvae			Larvae		
	Yolk-Sac	Post-Yolk-Sac	Juveniles	Yolk-Sac	Post-Yolk-Sac	Juveniles	Yolk-Sac	Post-Yolk-Sac	Juveniles
Striped bass	1	228	12	8	417	80	0	35	5
White perch	0	26	1	0	38	6	0	0	0
Atlantic tomcod	372	8	0	0	0	2	499	1	0
Bay anchovy	96	538	0	32	1,492	1	0	2	0
Clupeids	0	37	0	0	22	2	0	1	0
American eel	0	0	1	0	0	7	0	0	0
Rainbow smelt	0	0	0	0	2	0	0	0	2
Silversides	0	24	0	0	56	0	0	2	0
Sunfish	0	2	0	0	6	0	0	0	0
American shad	0	2	0	0	0	0	0	0	0
Winter flounder	0	1	0	0	0	0	0	1	0
Hogchoker	0	0	0	0	1	0	0	0	0
Northern pipefish	0	0	0	0	0	1	0	0	0
Tessellated darter	0	1	0	0	0	0	0	0	0

(a) 1 June - 15 July.
(b) 2 March, 7-18 March, 14-17 June.

TABLE 4-2 TAXA NOMENCLATURE

Family	Genus Species	Accepted Common Name
Anguillidae	*Anguilla rostrata*	American eel
Clupeidae		Clupeids
	Alosa sapidissima	American shad
Engraulidae	*Anchoa mitchilli*	Bay anchovy
Osmeridae	*Osmerus mordax*	Rainbow smelt
Gadidae	*Microgadus tomcod*	Atlantic tomcod
Atherinidae	*Menidia* spp.	Silversides
Syngnathidae	*Syngnathus fuscus*	Northern pipefish
Percichthyidae	*Morone* spp.	Temperature bass
	Morone americana	White perch
	Morone saxatilis	Striped bass
Centrarchidae		Sunfish
Percidae	*Etheostoma olmstedi*	Tessellated darter
Pleuronectidae	*Pseudopleuronectes americanus*	Winter flounder
Soleidae	*Trinectes maculatus*	Hogchoker

TABLE 4-3 TOTAL NUMBER OF EACH TAXON AND LIFE STAGE COLLECTED FOR SURVIVAL DETERMINATIONS AT THE BOWLINE POINT PLANT, 1977

Taxon	All Stations Total		
	Larvae		
	Yolk-sac	Post-yolk-sac	Juveniles
Striped bass	9	680	97
White perch	0	64	7
Atlantic tomcod	871	9	2
Bay anchovy	128	2,032	1
Clupeids	0	60	2
American eel	0	0	8
Rainbow smelt	0	2	2
Silversides	0	82	0
Sunfish	0	8	0
American shad	0	2	0
Winter flounder	0	2	0
Hogchoker	0	1	0
Northern pipefish	0	0	1
Tessellated darter	0	1	0

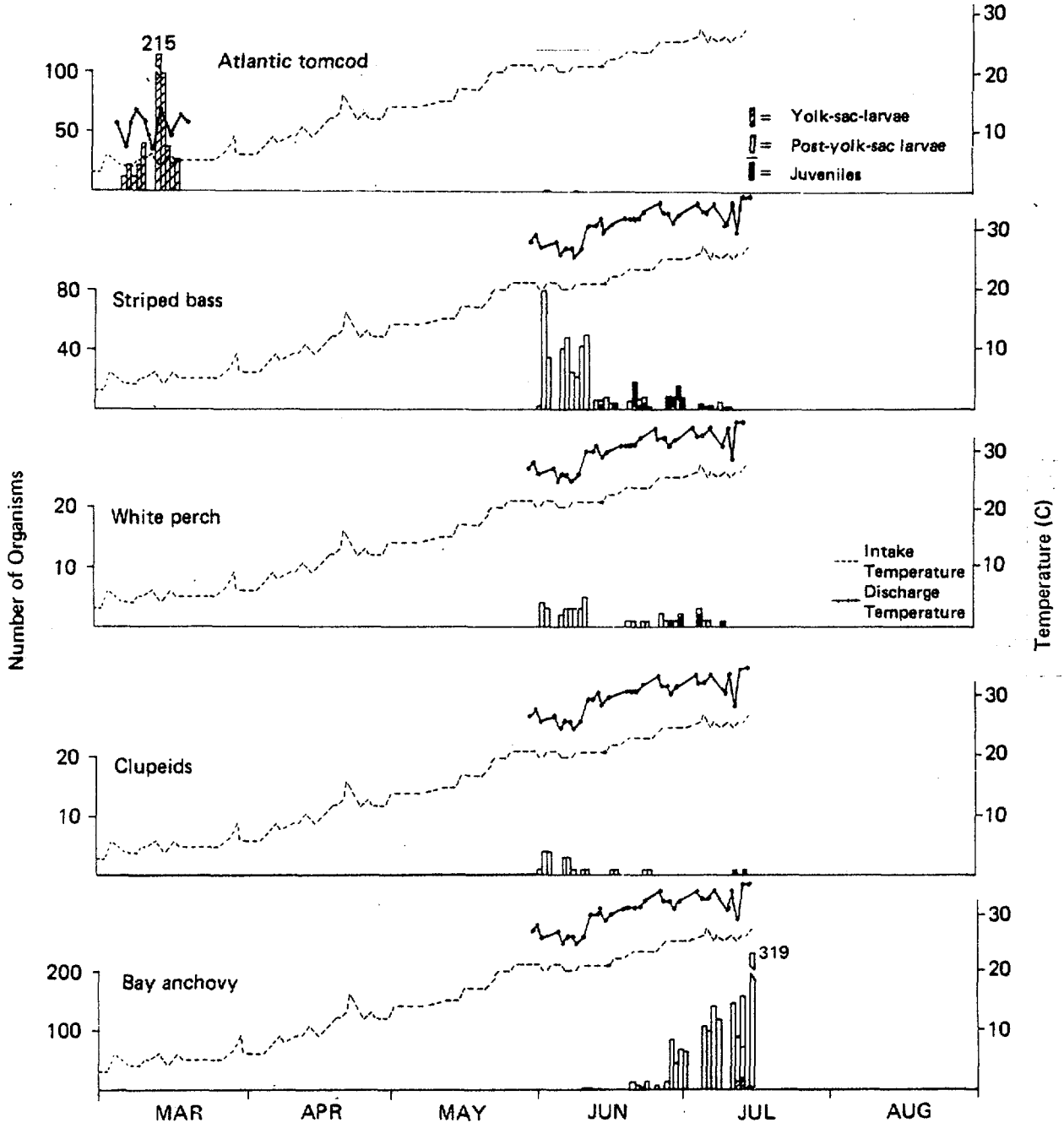


Figure 4-1. Seasonal distribution of ichthyoplankton collected for survival study at the Bowline Point plant circulating water discharge (Unit 2: MAR., Unit 1: JUN-JUL), 1977.

TABLE 4-4 DAILY WATER TEMPERATURE, DISSOLVED OXYGEN, AND pH MEASURED AT THE BOWLINE POINT PLANT INTAKE, 1977

Date	Temperature (C)	Dissolved Oxygen (mg/liter)	pH
5 JAN	1.0	11.5	--
7 JAN	1.1	-- (a)	--
8 JAN	1.2	--	--
17 JAN	2.7	--	--
27 JAN	1.0	11.0	7.2
28 JAN	1.0	13.1	7.0
30 JAN	0.5	12.4	7.2
31 JAN	0.8	12.7	7.3
3 FEB	0.6	12.6	7.3
4 FEB	0.6	12.4	7.7
8 FEB	0.4	13.3	7.4
9 FEB	0.9	13.7	7.8
10 FEB	1.6	12.2	7.8
11 FEB	1.8	12.3	7.6
14 FEB	2.3	13.3	7.7
15 FEB	2.2	11.9	7.7
16 FEB	2.0	11.4	7.7
17 FEB	1.9	10.8	7.8
18 FEB	2.0	--	--
22 FEB	1.6	12.0	7.9
23 FEB	2.8	11.5	7.7
24 FEB	2.6	12.1	7.9
25 FEB	2.4	--	7.6
28 FEB	2.4	--	7.6
1 MAR	3.2	11.6	7.9
2 MAR	3.2	12.1	7.4
3 MAR	4.0	11.0	7.4
6 MAR	5.5	10.2	7.6
7 MAR	4.0	--	7.4
8 MAR	4.2	11.3	7.5
9 MAR	3.7	11.5	7.6
10 MAR	5.0	11.3	7.7
11 MAR	4.6	11.4	7.6
13 MAR	5.8	10.8	7.7
14 MAR	4.8	11.5	7.6
15 MAR	4.3	11.6	7.8
16 MAR	4.9	12.7	7.7
17 MAR	5.5	12.8	7.6
18 MAR	4.7	12.7	7.6
20 MAR	5.8	12.0	7.9
21 MAR	5.4	12.8	7.8
22 MAR	5.3	12.5	7.9
23 MAR	4.6	12.6	8.2
24 MAR	4.5	13.2	7.8
28 MAR	5.5	13.1	7.7

(a) Dashes indicate no data available.

TABLE 4-4 (CONT.)

Date	Temperature (C)	Dissolved Oxygen (mg/liter)	pH
29 MAR	6.8	13.1	7.9
30 MAR	9.0	12.0	8.3
31 MAR	6.2	11.4	7.7
1 APR	6.3	12.2	7.6
4 APR	6.3	11.2	7.7
5 APR	7.2	10.9	8.2
6 APR	7.7	10.2	7.9
7 APR	8.7	9.8	8.0
8 APR	7.8	11.1	7.7
11 APR	8.6	10.6	7.6
12 APR	8.9	10.7	7.7
13 APR	9.5	10.3	7.9
14 APR	9.9	10.5	7.7
15 APR	9.1	10.2	7.7
18 APR	10.8	10.8	7.8
19 APR	11.8	9.4	7.9
20 APR	11.6	9.6	7.6
21 APR	13.3	9.3	7.8
22 APR	15.5	--	--
25 APR	11.5	--	--
27 APR	11.5	9.4	8.1
28 APR	12.4	9.7	7.9
29 APR	12.3	9.1	7.7
2 MAY	14.1	8.8	7.7
3 MAY	14.4	8.4	7.9
12 MAY	15.3	8.5	7.9
13 MAY	15.2	8.5	7.9
16 MAY	14.7	8.5	8.0
17 MAY	16.2	9.1	7.7
18 MAY	16.5	8.2	7.6
19 MAY	17.1	8.9	7.6
20 MAY	17.2	8.8	7.3
22 MAY	18.8	8.4	7.7
23 MAY	19.5	9.1	7.7
24 MAY	20.4	9.1	7.6
25 MAY	20.3	9.2	7.7
26 MAY	20.8	9.5	7.8
31 MAY	20.8	--	8.2
1 JUN	20.1	8.1	7.7
2 JUN	20.8	8.0	7.8
3 JUN	20.5	8.1	7.8
5 JUN	20.8	7.7	7.9
6 JUN	20.2	7.6	7.7
7 JUN	20.1	7.7	7.9
8 JUN	19.9	7.3	7.7
9 JUN	21.3	7.4	8.2

(a) Dashes indicate no data available.

TABLE 4-4 (CONT.)

Date	Temperature (C)	Dissolved Oxygen (mg/liter)	pH
12 JUN	20.5	7.4	8.1
13 JUN	21.3	7.4	8.2
14 JUN	20.9	7.5	7.7
15 JUN	21.9	7.3	7.8
16 JUN	22.0	7.4	7.6
20 JUN	22.8	8.2	8.1
21 JUN	22.8	8.1	8.3
23 JUN	23.0	9.0	8.6
24 JUN	23.8	9.2	8.2
25 JUN	23.3	8.3	7.9
26 JUN	24.4	7.9	7.8
27 JUN	24.8	7.7	7.9
28 JUN	24.6	7.0	7.9
29 JUN	24.6	6.8	7.7
30 JUN	25.0	6.5	7.3
1 JUL	25.0	--	7.1
5 JUL	26.0	7.8	7.3
6 JUL	27.0	6.7	7.3
7 JUL	25.3	7.3	7.3
8 JUL	25.7	6.6	7.4
9 JUL	24.9	6.3	7.4
11 JUL	26.0	6.8	7.4
12 JUL	25.4	6.2	7.6
13 JUL	25.7	7.0	7.3
14 JUL	26.3	6.7	7.6
15 JUL	26.5	6.9	7.6

(a) Dashes indicate no data available.

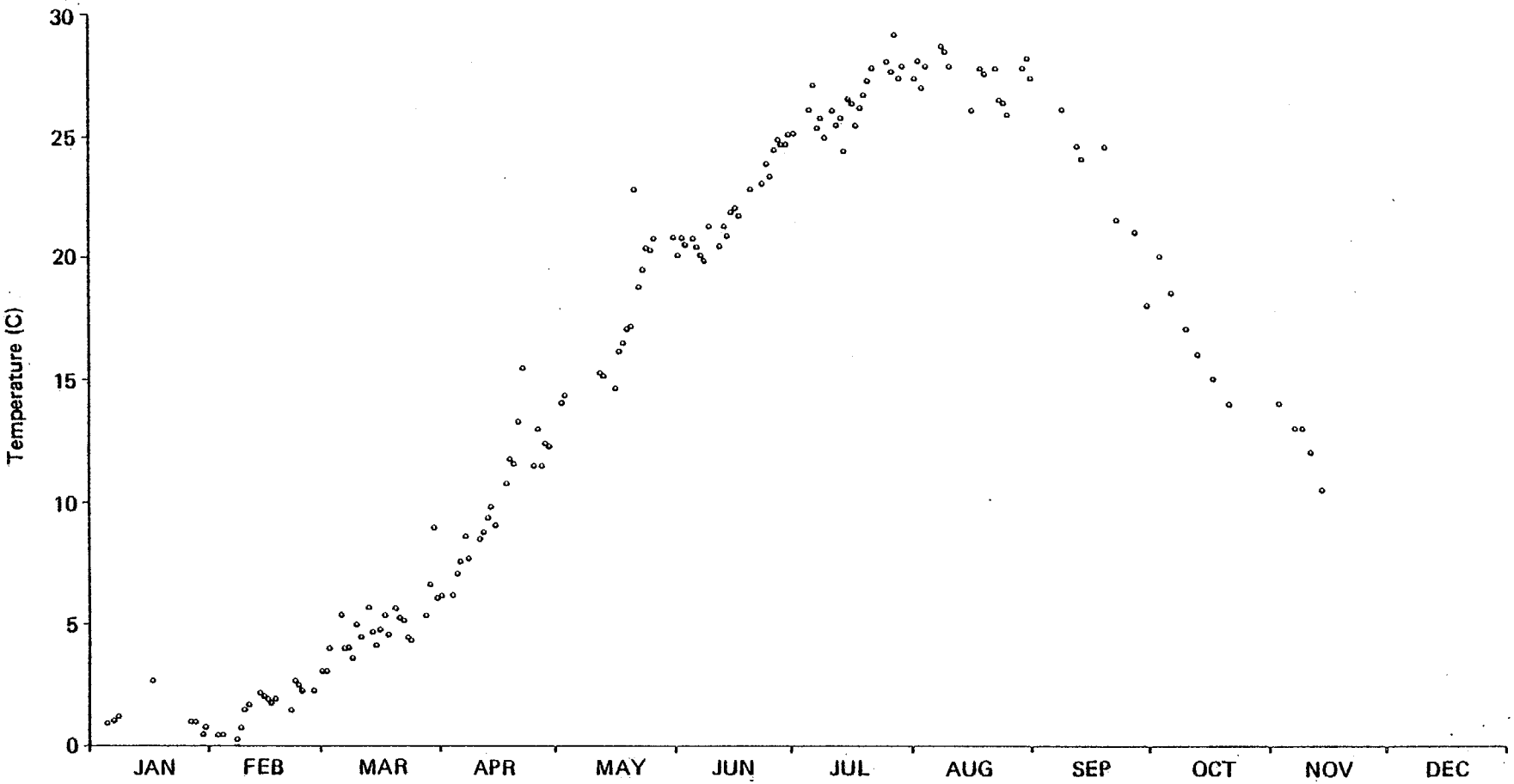


Figure 4-2. Water temperature measured at the Bowline Point plant intake, 1977.

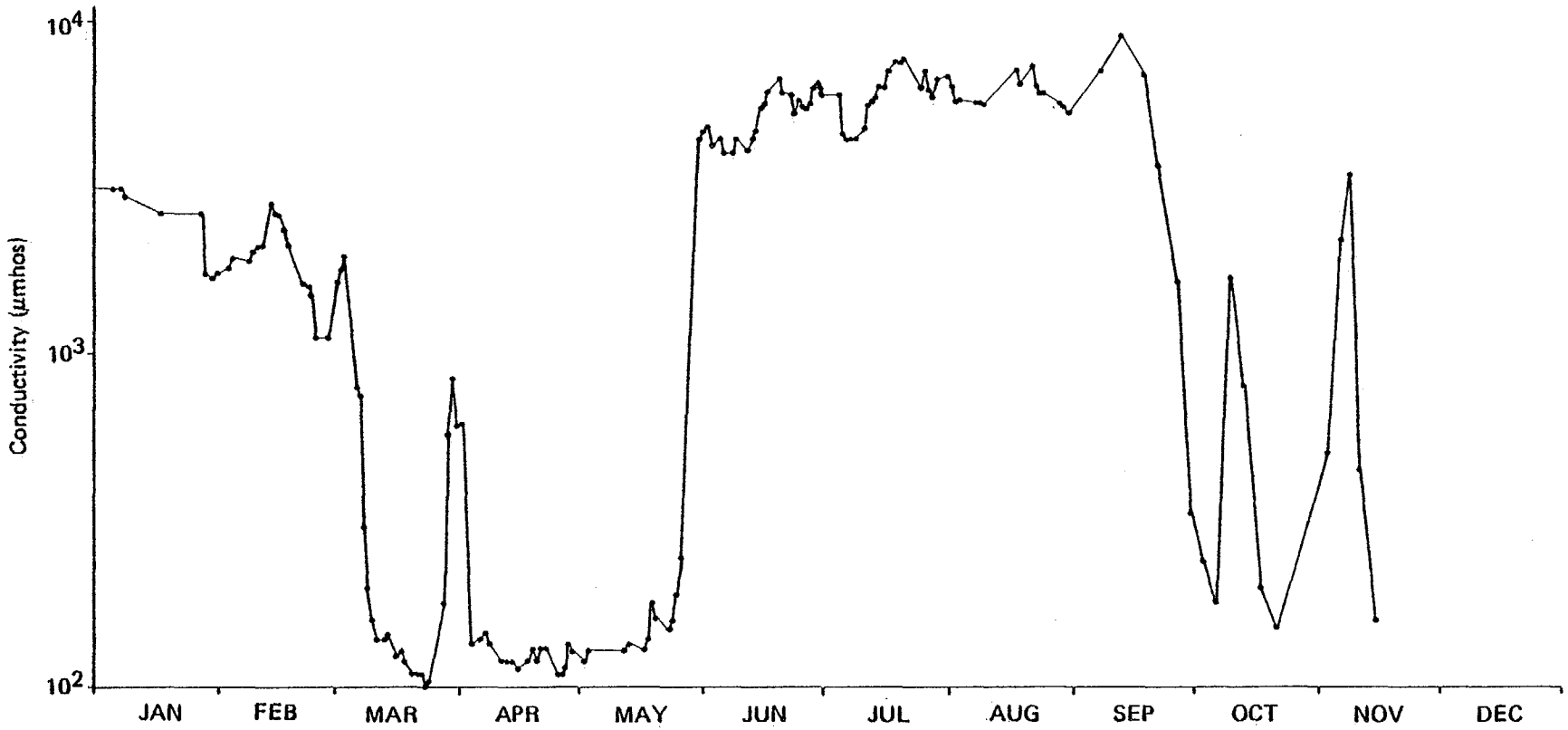


Figure 4-3. Water conductivity measured at the Bowline Point plant intake, 1977.

TABLE 4-5 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF STRIPED BASS COLLECTED AT THE INTAKE AND DISCHARGE OF THE BOWLINE POINT PLANT, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	57	7.4	1.3	0	2	50	5	0	0	0	0	0	5.0	7.0	11.0
12 JUN 77	144	8.5	2.1	1	2	84	44	11	2	0	0	0	2.0	8.0	15.0
18 JUN 77	10	9.9	1.5	0	0	2	6	2	0	0	0	0	8.0	10.0	13.0
24 JUN 77	15	12.4	4.1	0	1	1	3	8	1	0	0	1	5.0	12.0	24.0
2 JUL 77	11	18.5	3.9	0	0	0	1	0	2	5	2	1	9.0	19.0	24.0
9 JUL 77	1	15.0	0.0	0	0	0	0	0	1	0	0	0	15.0	15.0	15.0
15 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Discharge (Unit 1)

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	119	7.6	1.3	0	2	93	23	1	0	0	0	0	5.0	7.0	12.0
12 JUN 77	233	8.9	2.3	0	3	126	69	30	5	0	0	0	5.0	8.0	17.0
18 JUN 77	32	12.4	4.2	0	0	9	2	9	8	4	0	0	6.0	13.0	19.0
24 JUN 77	47	15.5	2.9	0	0	1	3	10	24	8	1	0	8.0	16.0	22.0
2 JUL 77	54	19.5	3.0	0	0	0	0	1	14	22	12	5	14.0	19.0	30.0
9 JUL 77	13	19.3	6.4	0	0	0	2	1	3	2	2	3	9.0	18.0	32.0
15 JUL 77	1	27.0	0.0	0	0	0	0	0	0	0	0	1	27.0	27.0	27.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-6 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF WHITE PERCH COLLECTED AT THE INTAKE AND DISCHARGE OF THE BOWLINE POINT PLANT, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	5	7.2	1.7	0	1	3	1	0	0	0	0	0	4.0	8.0	9.0
12 JUN 77	15	8.7	1.7	0	0	7	7	1	0	0	0	0	6.0	9.0	13.0
18 JUN 77	2	7.5	2.5	0	1	0	1	0	0	0	0	0	5.0	7.5	10.0
24 JUN 77	2	9.5	5.5	0	1	0	0	0	1	0	0	0	4.0	9.5	15.0
2 JUL 77	1	14.0	0.0	0	0	0	0	1	0	0	0	0	14.0	14.0	14.0
9 JUL 77	1	12.0	0.0	0	0	0	0	1	0	0	0	0	12.0	12.0	12.0
15 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Discharge (Unit 1)

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	7	6.4	1.3	0	2	4	1	0	0	0	0	0	5.0	6.0	9.0
12 JUN 77	16	8.3	1.9	0	2	6	8	0	0	0	0	0	3.0	8.5	11.0
18 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
24 JUN 77	3	5.3	0.5	0	2	1	0	0	0	0	0	0	5.0	5.0	6.0
2 JUL 77	9	13.7	5.7	0	1	2	0	2	2	1	1	0	5.0	14.0	23.0
9 JUL 77	7	14.9	3.5	0	0	0	2	3	0	1	1	0	11.0	14.0	21.0
15 JUL 77	1	26.0	0.0	0	0	0	0	0	0	0	0	1	26.0	26.0	26.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-7 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF ATLANTIC TOMCOD COLLECTED AT THE INTAKE AND DISCHARGE OF THE BOWLINE POINT PLANT, 1977

Intake

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
2 MAR 77	1	8.0	0.0	0	0	1	0	0	0	0	0	0	8.0	8.0	8.0
12 MAR 77	80	6.7	0.5	0	0	80	0	0	0	0	0	0	6.0	7.0	8.0
19 MAR 77	278	6.9	0.4	0	0	278	0	0	0	0	0	0	6.0	7.0	8.0

Discharge (Unit 2)

				Length Intervals (mm)									Range		
Date	N	X	SD	00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Min	Med	Max
2 MAR 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 MAR 77	114	6.9	0.4	0	0	114	0	0	0	0	0	0	6.0	7.0	8.0
19 MAR 77	373	6.8	0.4	0	0	373	0	0	0	0	0	0	6.0	7.0	8.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-8 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF CLUPEIDS COLLECTED AT THE INTAKE AND DISCHARGE OF THE BOWLINE POINT PLANT, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	13	12.7	2.2	0	0	0	3	8	2	0	0	0	10.0	12.0	17.0
12 JUN 77	10	13.8	6.8	0	1	2	2	0	3	1	0	1	5.0	13.0	30.0
18 JUN 77	3	7.7	0.9	0	0	2	1	0	0	0	0	0	7.0	7.0	9.0
24 JUN 77	9	9.3	2.6	0	0	4	4	0	1	0	0	0	6.0	9.0	15.0
2 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
15 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

Discharge (Unit 1)

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	9	11.3	1.8	0	0	0	5	4	0	0	0	0	9.0	10.0	14.0
12 JUN 77	8	9.9	2.7	0	0	3	3	1	1	0	0	0	7.0	9.5	15.0
18 JUN 77	2	6.5	0.5	0	0	2	0	0	0	0	0	0	6.0	6.5	7.0
24 JUN 77	2	9.5	3.5	0	0	1	0	1	0	0	0	0	6.0	9.5	13.0
2 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
9 JUL 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
15 JUL 77	1	42.0	0.0	0	0	0	0	0	0	0	0	1	42.0	42.0	42.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

TABLE 4-9 LENGTH-FREQUENCY DISTRIBUTION BY SAMPLING WEEK OF BAY ANCHOVY COLLECTED AT THE INTAKE AND DISCHARGE OF THE BOWLINE POINT PLANT, 1977

Intake

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 JUN 77	3	8.3	0.5	0	0	2	1	0	0	0	0	0	8.0	8.0	9.0
18 JUN 77	15	6.9	1.1	0	1	12	2	0	0	0	0	0	5.0	7.0	9.0
24 JUN 77	17	11.7	2.9	0	0	3	5	7	1	1	0	0	8.0	13.0	18.0
2 JUL 77	147	11.3	5.1	0	14	52	21	10	25	22	3	0	4.0	10.0	21.0
9 JUL 77	81	13.5	5.4	0	0	23	13	8	14	13	10	0	6.0	13.0	23.0
15 JUL 77	289	6.2	4.5	0	206	29	12	13	17	11	1	0	3.0	4.0	23.0

Discharge (Unit 1)

Date	N	X	SD	Length Intervals (mm) 00.0-02.9	03.0-05.9	06.0-08.9	09.0-11.9	12.0-14.9	15.0-17.9	18.0-20.9	21.0-23.9	24.0+	Range Min	Med	Max
4 JUN 77	0	0.0	0.0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
12 JUN 77	3	7.7	1.2	0	0	2	1	0	0	0	0	0	6.0	8.0	9.0
18 JUN 77	1	7.0	0.0	0	0	1	0	0	0	0	0	0	7.0	7.0	7.0
24 JUN 77	40	9.1	2.6	0	1	18	14	6	0	1	0	0	5.0	9.0	18.0
2 JUL 77	197	14.8	4.1	0	1	24	21	23	75	42	9	2	4.0	16.0	25.0
9 JUL 77	272	12.8	5.9	0	7	91	51	19	31	32	30	11	5.0	10.0	26.0
15 JUL 77	472	13.5	5.9	0	65	60	51	59	104	88	28	17	3.0	15.0	29.0

Note: N = number of lengths; X = mean length; SD = standard deviation;
Min = shortest length; Med = median length; Max = greatest length.

length frequencies are based on collections made at the discharge of Unit 1 with the exception of Atlantic tomcod. Members of this species were collected at the discharge of Unit 2 during the winter sampling effort.

The lengths of the fishes collected ranged from 2.0 mm to 42.0 mm, but the majority of specimens were in the 6.0 mm to 20.0 mm range. Weekly mean lengths for each species generally differed by less than 2 to 3 mm between intake and discharge stations for the larger sample sizes, with the exception of the 15 July collections of bay anchovy in which the mean length at the discharge was 7.3 mm greater than at the intake.

4.2 INTAKE AND DISCHARGE SURVIVAL

4.2.1 Initial and 96-Hour Survival

The survival of ichthyoplankton collected at the intake station in 1977 was similar to that measured in 1975 and 1976. Initial survival of striped bass and white perch post-yolk-sac larvae was 0.74 and 0.69, respectively (Tables 4-10 and 4-11), compared with 1975 values of 0.81 and 0.56, and 1976 values of 0.81 and 0.62. Initial survival for Atlantic tomcod yolk-sac larvae at the intake was 0.80 in 1977, compared with an initial survival value of 0.82 in 1976. Similarly, initial survival of clupeids was 0.54 compared with 0.46 in 1975. Initial survival of this species was slightly lower in 1976 (0.35). Bay anchovy intake survival, although still low, was somewhat higher in 1977 than in other years (0.16 compared with 0.07 in 1976, and 0.09 in 1975). In general, there was no significant difference (one-tailed z-test, $\alpha = 0.05$) in control survival from year to year except for bay anchovy post-yolk-sac larvae.

Survival at 96 hours for samples collected at the intake in 1977 was higher than or approximately the same as that of organisms collected in 1975 and 1976. Striped bass post-yolk-sac larvae 96-hour survival was 0.59 in 1977, 0.40 in 1976, and 0.30 in 1975. Similarly, white perch of the same life stage exhibited 96-hour survival of 0.46 in 1977, 0.24 in 1976, and 0.20 in 1975. This increase in 96-hour survival was also evident for Atlantic tomcod yolk-sac and post-yolk-sac larvae: 0.67 and 0.37, respectively, in 1977 compared with 0.54 and 0.09 in 1976. Clupeid and bay anchovy post-yolk-sac larvae exhibited similar trends. This steady increase in 96-hour survival over sampling years probably results in part from improvements in collection and transfer techniques between the years 1975 and 1977.

Initial survival at the discharge was high for most species and life stages. It should be noted that survival at the discharge of Unit 2 is representative of through-plant effects without an increase in water temperature (delta-T) for all species and life stages except Atlantic tomcod yolk-sac and post-yolk-sac larvae. Survival at 96 hours was high for striped bass post-yolk-sac larvae and juveniles at the discharge of both Units 1 and 2 (0.55 and 0.66, respectively, for post-yolk-sac larvae; 0.75 and 0.60 for juveniles). Atlantic tomcod 96-hour survival was also high for yolk-sac larvae (0.67), whereas post-yolk-sac larvae survival was intermediate (0.37) although only seven organisms were available for latent effects study. White perch post-yolk-sac larvae survival was also intermediate at 96 hours (0.16), and high (0.50) for juveniles. Clupeid and bay anchovy 96-hour survival was low at the discharge of Unit 1 (0-0.05).

TABLE 4-10 MEAN INITIAL AND 96-HOUR SURVIVAL OF EACH TAXON AND LIFE STAGE AT THE BOWLINE POINT PLANT INTAKE (I) AND DISCHARGE (D), 1977

		Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
			Proportion Alive[a]			Proportion Alive			Proportion Alive	
Species	Station[b]	No. of Fish	Initial	96-hr	No. of Fish	Initial	96-hr	No. of Fish	Initial	96-hr
Striped bass	I	1	1.00	0.00	228	0.74±0.03	0.59±0.03	12	0.92±0.08	0.83±0.11
	D1	8	0.75±0.15[c]	0.25±0.15	417	0.72±0.02	0.55±0.03	80	0.77±0.05	0.75±0.05
	D2	0	--	--	35	0.71±0.08	0.66±0.08	5	0.62±0.22	0.60±0.22
White perch	I	0	--	--	26	0.69±0.09	0.46±0.10	1	1.00	1.00
	D1	0	--	--	38	0.34±0.08	0.16±0.06	6	0.50±0.20	0.50±0.20
	D2	0	--	--	0	--	--	0	--	--
Atlantic tomcod	I	372	0.80±0.02	0.67±0.03	8	0.87±0.12	0.37±0.17	0	--	--
	D1	NS[d]	--	--	NS	--	--	2	0.00	--
	D2	499	0.67±0.02	0.53±0.02	1	1.00	0.00	0	--	--
Bay anchovy	I	96	0.00	--	538	0.16±0.01	0.02±0.01	0	--	--
	D1	32	0.00	--	1,492	0.02±0.01	0.00	1	0.00	--
	D2	0	--	--	2	0.00	--	0	--	--
Clupeids	I	0	--	--	37	0.54±0.08	0.16±0.06	0	--	--
	D1	0	--	--	22	0.23±0.09	0.05±0.05	2	0.00	--
	D2	0	--	--	1	0.00	--	0	--	--
American eel	I	0	--	--	0	--	--	1	1.00	1.00
	D1	0	--	--	0	--	--	7	0.71±0.17	0.57±0.19
	D2	0	--	--	0	--	--	0	--	--
Rainbow smelt	I	0	--	--	0	--	--	0	--	--
	D1	0	--	--	2	0.00	--	0	--	--
	D2	0	--	--	0	--	--	2	0.50±0.35	0.50±0.35
Silversides	I	0	--	--	24	0.37±0.10	0.04±0.05	0	--	--
	D1	0	--	--	56	0.16±0.05	0.00	0	--	--
	D2	0	--	--	2	0.00	--	0	--	--
Tessellated darter	I	0	--	--	1	1.00	1.00	0	--	--
	D1	0	--	--	0	--	--	0	--	--
	D2	0	--	--	0	--	--	0	--	--
Hogchoker	I	0	--	--	0	--	--	0	--	--
	D1	0	--	--	1	1.00	1.00	0	--	--
	D2	0	--	--	0	--	--	0	--	--
Northern pipefish	I	0	--	--	0	--	--	0	--	--
	D1	0	--	--	0	--	--	1	1.00	0.00
	D2	0	--	--	0	--	--	0	--	--

(a) Proportion alive = (number live + number stunned)/total number organisms collected.
(b) I = intake; D1 = discharge of Unit 1; D2 = discharge of Unit 2.
(c) ±1 standard error
(d) NS = not sampled.

TABLE 4-10 (CONT.)

Species	Station[b]	Yolk-Sac Larvae: No. of Fish	Yolk-Sac Larvae: Proportion Alive[a] Initial	Yolk-Sac Larvae: Proportion Alive[a] 96-hr	Post-Yolk-Sac Larvae: No. of Fish	Post-Yolk-Sac Larvae: Proportion Alive Initial	Post-Yolk-Sac Larvae: Proportion Alive 96-hr	Juveniles: No. of Fish	Juveniles: Proportion Alive Initial	Juveniles: Proportion Alive 96-hr
Winter flounder	I	0	--	--	1	0.00	--	0	--	--
	D1	0	--	--	0	--	--	0	--	--
	D2	0	--	--	1	1.00	1.00	0	--	--
American shad	I	0	--	--	2	0.50±0.35	0.50±0.35	0	--	--
	D1	0	--	--	0	--	--	0	--	--
	D2	0	--	--	0	--	--	0	--	--
Sunfish	I	0	--	--	2	1.00	0.00	0	--	--
	D1	0	--	--	6	0.00	--	0	--	--
	D2	0	--	--	0	--	--	0	--	--

(a) Proportion alive = (number live + number stunned)/number of organisms collected.
(b) I = intake; D1 = discharge of Unit 1; D2 = discharge of Unit 2.

TABLE 4-11 INITIAL AND 96-HOUR SURVIVAL OF ICHTHYOPLANKTON CLASSIFIED AS LIVE, COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) OF THE BOWLINE POINT PLANT IN 1977

		Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
			Proportion Live[a]			Proportion Live			Proportion Live	
Taxon	Station	No. of Fish	Initial	96-hour	No. of Fish	Initial	96-hour	No. of Fish	Initial	96-hour
Striped bass	I	1	1.00	0.00	228	0.68±0.03	0.56±0.03	12	0.83±0.11	0.75±0.13
	D1	8	0.75±0.15[b]	0.25±0.15	417	0.67±0.03	0.55±0.03	80	0.76±0.05	0.75±0.05
	D2	0	--	--	35	0.71±0.08	0.66±0.08	5	0.60±0.22	0.60±0.22
White perch	I	0	--	--	26	0.65±0.09	0.42±0.10	1	1.00	1.00
	D1	0	--	--	38	0.26±0.07	0.16±0.06	6	0.50±0.20	0.50±0.20
	D2	0	--	--	0	--	--	0	--	--
Clupeids	I	0	--	--	37	0.49±0.08	0.16±0.12	0	--	--
	D1	0	--	--	22	0.18±0.08	0.05±0.05	2	0.00	--
	D2	0	--	--	1	0.00	--	0	--	--
Bay anchovy	I	96	0.00	--	538	0.07±0.01	0.02±0.01	0	--	--
	D1	32	0.00	--	1,492	0.00	--	1	0.00	--
	D2	0	--	--	2	0.00	--	0	--	--
Atlantic tomcod	I	372	0.65±0.03	0.55±0.03	8	0.37±0.33	0.25±0.15	0	--	--
	D1	NS[c]	--	--	NS	--	--	2	0.00	--
	D2	499	0.53±0.02	0.45±0.02	1	1.00	0.00	0	--	--

(a) Proportion live = number of organisms classified as live/number of live and stunned and dead.
(b) ±1 standard error
(c) NS indicates not sampled.

4.2.2 Latent Survival

Survival of organisms initially alive (live and stunned) at the intake and discharge stations was monitored for 96 hours following sample collection. Latent survival of controls (intake) was much higher for striped bass, white perch, and Atlantic tomcod than for bay anchovy and clupeids (Table 4-12). This observation is consistent with the results of the 1975 and 1976 latent analyses. Latent survival at 96 hours (based on an initial survival of 1.0) at the intake was 0.80 for striped bass post-yolk-sac larvae and 0.67 for white perch (compared with 1975-1976 values of 0.37-0.49 for striped bass and 0.36-0.39 for white perch, respectively). The very high latent survival of Morone juveniles at the intake (0.9-1.0) indicates the resistance of larger fish to the stress of collection and holding.

Statistical confidence for the comparison of latent effects between intake and discharge stations was highest for striped bass post-yolk-sac larvae and Atlantic tomcod yolk-sac larvae since large numbers of these organisms were available for latent effects study (Table 4-12). For both the taxa, latent survival curves were very similar at intake and discharge stations (Figures 4-4 and 4-5). The survival curves level off at very high values (>80 percent) by about 12 hours following collection, with the discharge in both cases averaging only about 5 percent below control survival. Significant differences were observed only at the 3-, 12-, and 24-hour observations for striped bass larvae and at the 3- and 72-hour observations for Atlantic tomcod.

Latent survival did not differ significantly between intake and discharge stations for striped bass juveniles or clupeid larvae. Survival of the striped bass juveniles through 96 hours was very high (>90 percent) at both stations (Figure 4-6). The observed latent survival of Morone spp. at Bowline Point in 1977 was slightly higher than that observed in 1976. Clupeid larvae did not survive the holding period as well as striped bass or tomcod larvae, but the latent effects curves at intake and discharge were parallel and level from 24 to 96 hours (Figure 4-7).

Survival of white perch larvae collected alive in the discharge (n = 13) was significantly lower than in the intake from the 3-hour to the 48-hour observation, but converged with the intake after that time (Table 4-12). The difference between the curves is primarily the result of the death of four larvae in the discharge collections during the first 3 hours following collection, after which the latent survival is approximately parallel at intake and discharge.

The rapid mortality of bay anchovy following collection at both the intake and discharge in this and other studies (Ecological Analysts 1976, 1977a) made quantification of total entrainment effects difficult. The intake and discharge survival curves for juveniles appeared to parallel one another in 1975, although discharge latent survival was lower. However, in 1976 the discharge survival of bay anchovy was rapidly diverging from intake survival at the time discharge survival reached zero.

Proportions of striped bass, white perch, and Atlantic tomcod that were initially classified as live and that survived up to 96 hours are shown in Table 4-13. For this analysis, those organisms initially classified as stunned were included in the dead category. Latent survival using this method is

TABLE 4-12 LATENT SURVIVAL OF LARVAL AND JUVENILE FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE BOWLINE POINT PLANT, 1977

Species	Life Stage	Station	No. of Organisms[a]	Time Since Collection (hr) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	169	1.00	0.99±0.01*[b]	0.97±0.01	0.96±0.02*	0.95±0.02*	0.93±0.02	0.88±0.03	0.80±0.03
		D	299	1.00	0.94±0.01	0.93±0.02	0.90±0.02	0.89±0.02	0.89±0.02	0.83±0.02	0.76±0.03
	Juveniles	I	11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90±0.09
		D	62	1.00	0.99±0.01	0.97±0.02	0.97±0.02	0.97±0.02	0.97±0.02	0.97±0.02	0.97±0.02
White perch	Larvae	I	18	1.00	1.00*	1.00*	0.94±0.06*	0.90±0.07*	0.90±0.07*	0.78±0.10	0.67±0.11
		D	13	1.00	0.71±0.13	0.62±0.14	0.62±0.14	0.53±0.14	0.53±0.14	0.47±0.14	0.47±0.14
	Juveniles	I	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		D	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Clupeids	Larvae	I	20	1.00	0.80±0.09	0.70±0.10	0.59±0.11	0.35±0.11	0.35±0.11	0.35±0.11	0.30±0.10
		D	5	1.00	0.78±0.18	0.61±0.22	0.22±0.18	0.21±0.18	0.22±0.18	0.22±0.18	0.22±0.18
Bay anchovy	Larvae	I	84	1.00	0.25±0.05*	0.25±0.05*	0.19±0.04*	0.19±0.04*	0.13±0.04*	0.13±0.04*	0.13±0.04*
		D	37	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic tomcod	Larvae	I	7	1.00	0.58±0.19*	0.58±0.19*	0.58±0.19*	0.43±0.19*	0.43±0.19*	0.43±0.19*	0.43±0.19*
		D	1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Yolk-sac larvae	I	298	1.00	0.96±0.01*	0.93±0.02	0.90±0.02	0.88±0.02	0.86±0.02	0.85±0.02*	0.84±0.02
		D	335	1.00	0.91±0.02	0.88±0.02	0.85±0.02	0.84±0.02	0.81±0.02	0.79±0.02	0.79±0.02

(a) Number of organisms indicates number of fish alive (live + stunned) at 0 hours.
(b) ±1 standard error

Note: * indicates survival at the discharge significantly lower than that at the intake for a one-tailed test of the difference in two proportions at the $\alpha = 0.05$ level (z-test).

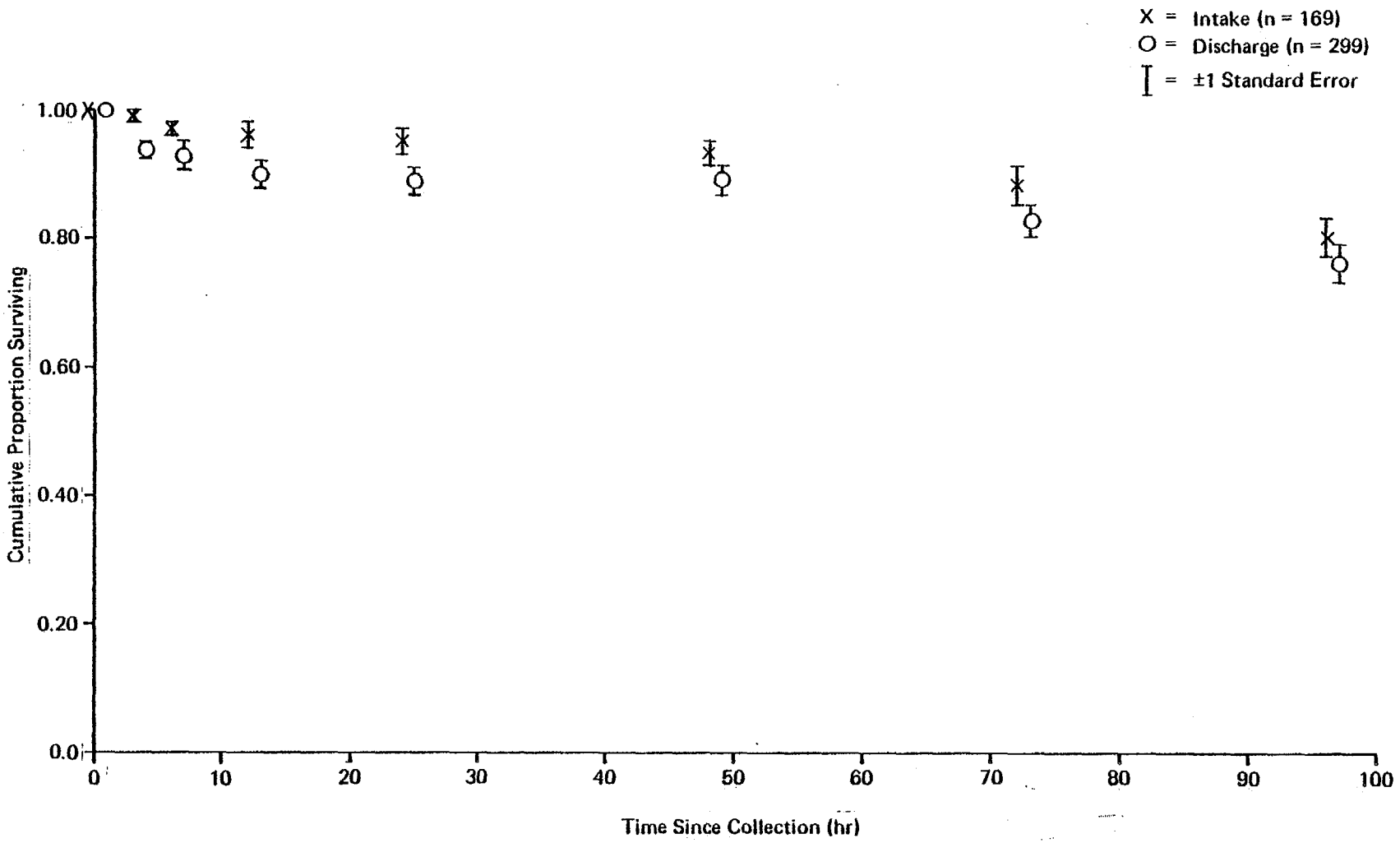


Figure 4-4. Latent survival of striped bass post-yolk-sac larvae collected at the intake and discharge of the Bowline Point plant, 1977.

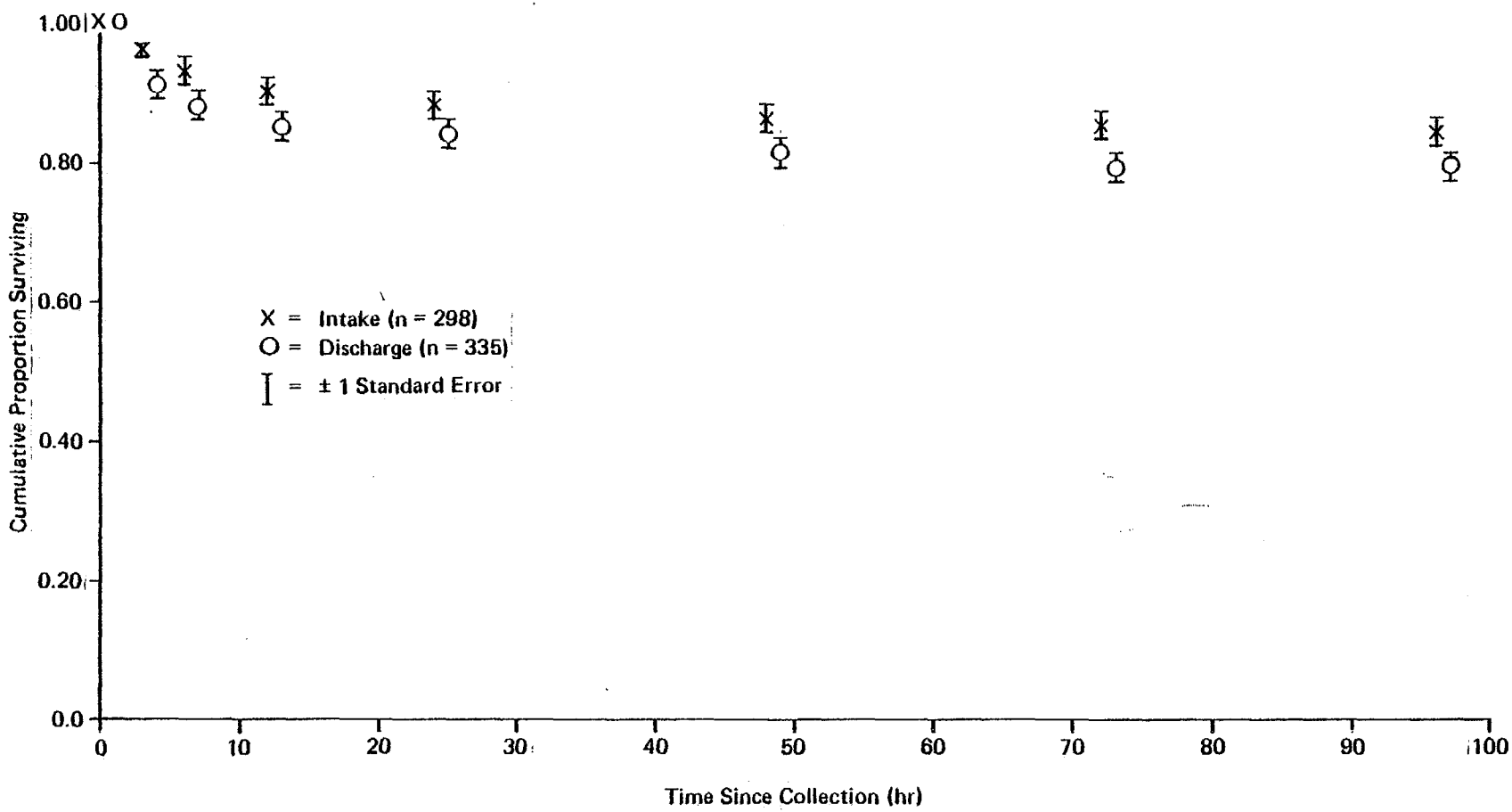


Figure 4-5. Latent survival of Atlantic tomcod yolk-sac larvae collected at the Bowline Point plant, 1977.

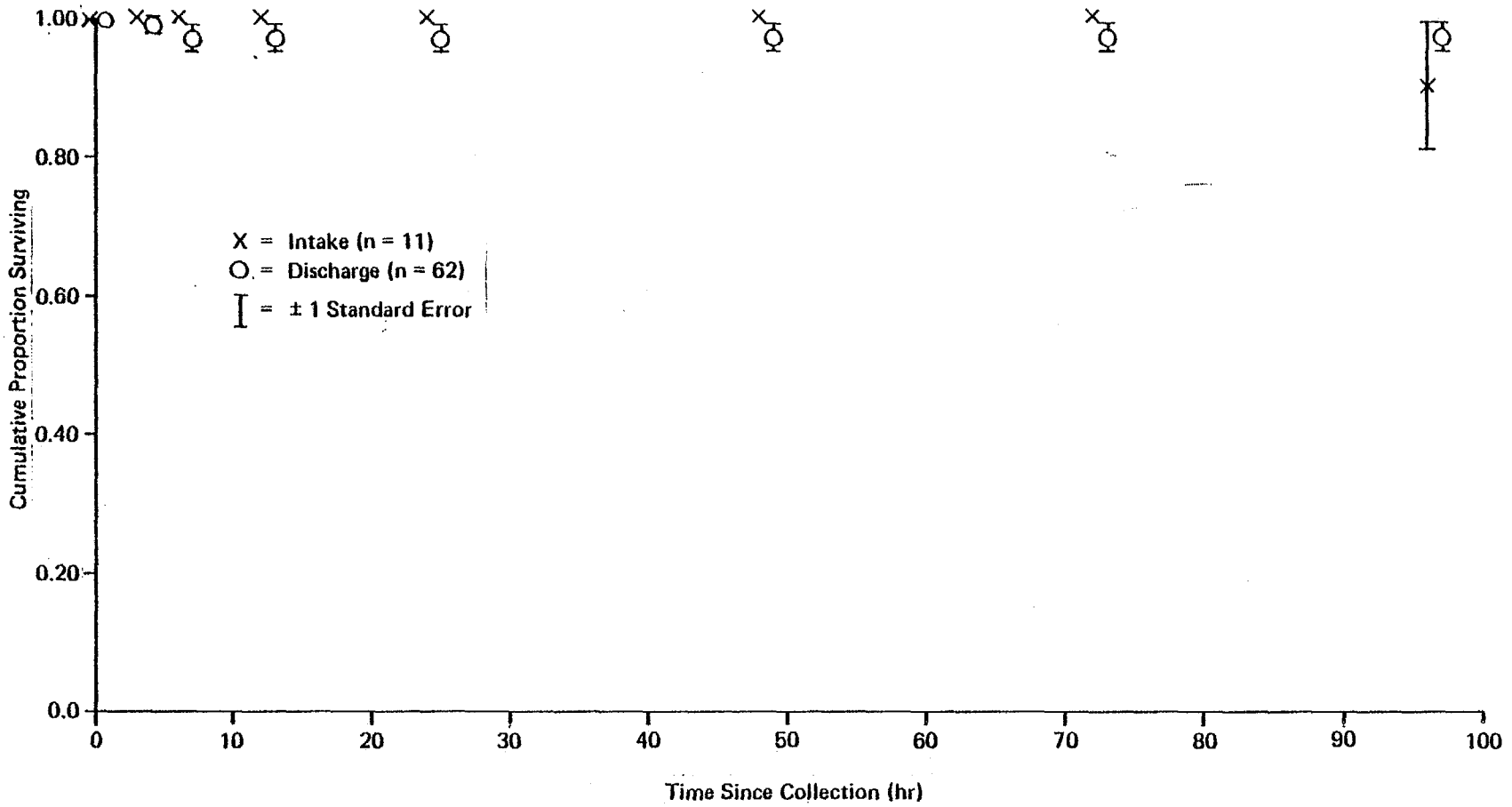


Figure 4-6. Latent survival of striped bass juveniles collected at the intake and discharge of the Bowline Point plant, 1977.

TABLE 4-13 LATENT SURVIVAL OF LIVE[a] LARVAL AND JUVENILE FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE BOWLINE POINT PLANT, 1977

Species	Life Stage	Station	No. of Organisms	Time Since Collection (hr) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	154	1.00	1.00*	1.00*	0.99±0.01	0.99±0.01*	0.97±0.01*	0.91±0.02	0.82±0.03
		D	278	1.00	0.97±0.01[b]	0.97±0.01	0.99±0.01	0.94±0.01	0.94±0.01	0.90±0.01	0.82±0.02
	Juveniles	I	10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90±0.09
		D	61	1.00	1.00	0.99±0.02	0.99±0.02	0.99±0.02	0.99±0.02	0.99±0.02	0.99±0.02
White perch	Larvae	I	17	1.00	1.00	1.00	0.95±0.05	0.89±0.08	0.89±0.08	0.77±0.10	0.65±0.12
		D	10	1.00	0.92±0.09	0.81±0.13	0.81±0.13	0.69±0.15	0.69±0.15	0.62±0.16	0.62±0.16
	Juveniles	I	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		D	3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Clupeid	Larvae	I	18	1.00	0.84±0.09	0.78±0.10	0.65±0.11	0.39±0.11	0.39±0.11	0.39±0.11	0.33±0.11
		D	4	1.00	1.00	0.78±0.21	0.28±0.23	0.28±0.23	0.28±0.23	0.28±0.23	0.28±0.23
Atlantic tomcod	Larvae	I	3	1.00	0.67±0.27*	0.67±0.27*	0.67±0.27*	0.67±0.27*	0.67±0.27*	0.67±0.27*	0.67±0.27*
		D	1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Yolk-sac larvae	I	240	1.00	0.97±0.01	0.94±0.02	0.92±0.02	0.91±0.02	0.89±0.02	0.88±0.02	0.85±0.02
		D	265	1.00	0.96±0.01	0.94±0.01	0.91±0.02	0.91±0.02	0.89±0.02	0.87±0.02	0.85±0.02

(a) Latent survival is exclusively for those organisms initially classified as live (stunned are excluded).
(b) ± standard error.

Note: * indicates survival at the discharge significantly lower than at the intake for a one-tailed test of the difference in two proportions at the $\alpha = 0.05$ level.

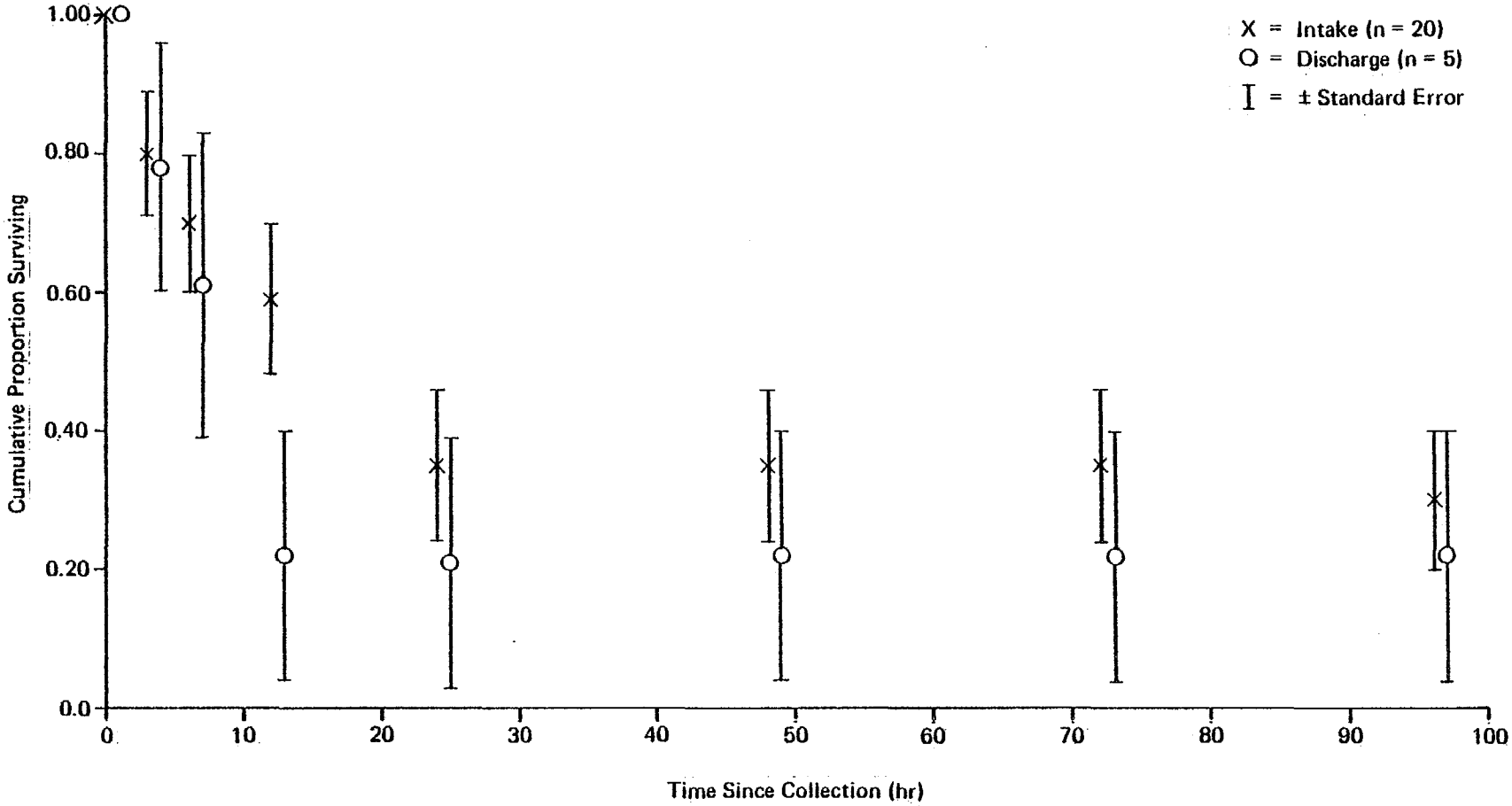


Figure 4-7. Latent survival of clupeid post-yolk-sac larvae collected at the Bowline Point plant, 1977.

very similar to latent survival when the stunned organisms are included in the analysis. The inclusion of stunned organisms in the entrainment survival analyses does not significantly alter the comparability of latent survival at intake and discharge stations. Since the stunned classification is a subjective category and, moreover, since stunned organisms do survive the 96-hour latent effects observation period (Table 4-14), calculations of entrainment survival (Section 4.5) have been made with the combined "live" and "stunned" data.

4.3 MECHANICAL AND THERMAL EFFECTS ON SURVIVAL

4.3.1 Mechanical Effects

Two basic sets of data were used to determine the nonthermal, or mechanical, effects of entrainment on larvae and juveniles collected at the Bowline Point plant during 1977. Survival data obtained while the units were generating power (Unit 2 for Atlantic tomcod, Unit 1 for other species) were grouped into intervals depending on the discharge temperature at the time of collection. The lowest temperature intervals were well below upper thermal tolerance limits of the species as determined from laboratory experiments for exposure times (30-40 minutes) characteristic of that occurring in the collection process (Ecological Analysts 1978c). Discharge survival of striped bass, white perch, and clupeids below 30.0 C and of Atlantic tomcod below 20.0 C was considered representative of the nonthermal effects of entrainment (Table 4-15). Discharge survival in the absence of thermal stress was high (0.65 to 0.83) for striped bass and Atlantic tomcod in all of the possible plant circulating pump modes (2 pumps throttled, 2 pumps unthrottled, 3 pumps unthrottled). Survival of these species was slightly lower during throttled operation than it was with the circulating water system unthrottled. Only a few white perch and clupeids were collected at low discharge temperatures for each pump mode. Survival of white perch varied from 0.50 (n = 12) with 2 pumps throttled to 0.33 (n = 3) with 3 pumps operating, while clupeid survival in the discharge was 0.44 (n = 9) with 2 pumps throttled and 0.12 with 2 pumps in the unthrottled mode. Bay anchovy survival at the discharge was low (0.00 to 0.05) under all pumping conditions.

During 14-17 June, survival samples were also collected at the discharge of Unit 2 during a shutdown in power generation at that unit. Samples collected during this period were therefore not exposed to any thermal elevation and survival of ichthyoplankton is indicative of purely mechanical influences. Striped bass was the predominant species collected from Unit 2 in June (Table 4-10). Survival of striped bass post-yolk-sac larvae in the discharge of Unit 2 with no delta-T present was 0.71 and is in excellent agreement with the combined survival (0.72) of all striped bass larvae collected from Unit 1 in 1977 at discharge temperatures below 30.0 C (Table 4-15).

4.3.2 Thermal Effects

Thermal exposure did not reduce the observed initial survival for either striped bass or bay anchovy at discharge temperature up to 33.0 C (Table 4-16). The initial discharge survival of striped bass post-yolk-sac larvae and juveniles and of bay anchovy post-yolk-sac larvae was significantly lower at temperatures between 33.0 and 35.9 C than at temperatures below 33.0 C. The results for striped bass are consistent with the thermal effect which

TABLE 4-14 LATENT SURVIVAL OF STUNNED LARVAL AND JUVENILE FISHES COLLECTED AT THE INTAKE (I) AND DISCHARGE (D) DURING ENTRAINMENT SURVIVAL SAMPLING AT THE BOWLINE POINT PLANT, 1977

Species	Life Stage	Station	Number of Organisms[a]	Time Since Collection (hours) 0	3	6	12	24	48	72	96
Striped bass	Larvae	I	15	1.00	0.80±0.10[b]	0.67±0.12	0.60±0.13	0.53±0.13*	0.47±0.13*	0.47±0.13*	0.47±0.13*
		D	21	1.00	0.57±0.11	0.43±0.11	0.29±0.10	0.19±0.09*	0.14±0.08*	0.09±0.06*	0.09±0.06*
	Juvenile	I	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		D	1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch	Larvae	I	1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		D	3	1.00	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27
Clupeids	Larvae	I	2	1.00	0.50±0.35	0.00	0.00	0.00	0.00	0.00	0.00
		D	1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy	Larvae	I	49	1.00	0.25±0.05*	0.25±0.05*	0.19±0.04*	0.19±0.04*	0.13±0.04	0.13±0.04	0.13±0.04
		D	32	1.00	0.03±0.03*	0.03±0.03*	0.03±0.03*	0.03±0.03*	0.03±0.03	0.03±0.03	0.03±0.03
Atlantic tomcod	Larvae	I	3	1.00	0.67±0.27	0.67±0.27	0.67±0.27	0.33±0.27	0.33±0.27	0.33±0.27	0.33±0.27
		D	0	--	--	--	--	--	--	--	--
	Yolk-sac larvae	I	58	1.00	0.84±0.05	0.78±0.05	0.72±0.06	0.72±0.06*	0.72±0.06*	0.72±0.06*	0.72±0.06*
		D	71	1.00	0.75±0.05	0.69±0.05	0.59±0.06	0.53±0.06*	0.49±0.06*	0.49±0.06*	0.49±0.06*

(a) Number of organisms indicates the number of organisms collected which were initially classified as stunned.
(b) ± standard error.

Note: * indicates survival at the discharge significantly lower than at the intake for a one-tailed Z-test of the difference between two proportions at the $\alpha = 0.05$ level.

TABLE 4-15 SURVIVAL OF ICHTHYOPLANKTON AT THE INTAKE (I) AND DISCHARGE (D) OF THE BOWLINE POINT PLANT AS A FUNCTION OF TEMPERATURE AND CIRCULATOR PUMP OPERATION, 1977

Taxon	Life Stage	Station	Temperature (C)	2 Pumps Throttled		2 Pumps Full		3 Pumps Full		Intake	
				No. of Fish	P_s(a)	No. of Fish	P_s	No. of Fish	P_s	No. of Fish	P_s
Striped bass	Yolk-sac larvae	I								1	1.00
		D1	20.0-29.9	3	0.67	4	0.75	0	--		
		D1	30.0-32-9	1	1.00	0	--	0	--		
		D1	33.0-35.9	0	--	0	--	0	--		
	Post-yolk-sac larvae	I								228	0.74
		D1	20.0-29.9	188	0.67	109	0.78	61	0.77		
		D1	30.0-32.9	14	0.79	26	0.77	9	0.78		
		D1	33.0-35.9	0	--	1	0.00	9	0.33		
	Juveniles	I								12	0.92
		D1	20.0-29.9	0	--	6	0.83	0	--		
		D1	30.0-32.9	1	0.00	25	0.88	38	0.82		
		D1	33.0-35.9	0	--	0	--	10	0.40		
White perch	Yolk-sac larvae	I								0	--
		D1	20.0-29.9	0	--	0	--	0	--		
		D1	30.0-32.9	0	--	0	--	0	--		
		D1	33.0-35.9	0	--	0	--	0	--		
	Post-yolk-sac larvae	I								26	0.69
		D1	20.0-29.9	12	0.50	8	0.37	3	0.33		
		D1	30.0-32.9	0	--	4	0.00	5	0.20		
		D1	33.0-35.9	0	--	2	0.00	4	0.50		
	Juveniles	I								1	1.00
		D1	20.0-29.9	0	--	0	--	0	--		
		D1	30.0-32.9	0	--	0	--	4	0.75		
		D1	33.0-35.9	0	--	0	--	2	0.00		
Atlantic tomcod	Yolk-sac larvae	I								372	0.80
		D2	0.0-13.9	292	0.65	130	0.67	55	0.76		
		D2	14.0-17.9	22	0.68	0	--	0	--		
	Post-yolk-sac larvae	I								8	0.87
		D2	0.0-13.9	1	1.00	0	--	0	--		
		D2	14.0-17.9	0	--	0	--	0	--		
	Juveniles	I								0	--
		D1	20.0-29.9	1	0.00	1	0.00	0	--		
		D1	30.0-32.9	0	--	0	--	0	--		
		D1	33.0-35.9	0	--	0	--	0	--		
Clupeids	Yolk-sac larvae	I								0	--
		D1	20.0-29.9	0	--	0	--	0	--		
		D1	30.0-32.9	0	--	0	--	0	--		
		D1	33.0-35.9	0	--	0	--	0	--		

(a) P_s = initial proportion surviving: (No. alive + No. stunned)/(No. alive + No. stunned + No. dead).

TABLE 4-15 (CONT.)

Taxon	Life Stage	Station	Temperature (C)	2 Pumps Throttled		2 Pumps Full		3 Pumps Full		Intake	
				No. of Fish	P_s(a)	No. of Fish	P_s	No. of Fish	P_s	No. of Fish	P_s
Clupeids	Post-yolk-sac larvae	I								37	0.54
		D1	20.0-29.9	9	0.44	8	0.12	1	0.00		
		D1	30.0-32.9	2	0.00	2	0.00	0	--		
		D1	33.0-35.9	0	--	0	--	0	--		
	Juveniles	I								0	--
		D	20.0-29.9	0	--	0	--	0	--		
		D	30.0-32.9	0	--	0	--	0	--		
		D	33.0-35.9	0	--	0	--	2	0.00		
Bay anchovy	Yolk-sac larvae	I								96	0.00
		D1	20.0-29.9	0	--	0	--	7	0.00		
		D1	30.0-32.9	0	--	0	--	1	0.00		
		D1	33.0-35.0	0	--	0	--	24	0.00		
	Post-yolk-sac larvae	I								538	0.16
		D1	20.0-29.9	2	0.00	9	0.00	123	0.05		
		D1	30.0-32.9	0	--	38	0.05	356	0.06		
		D1	33.0-35.9	0	--	11	0.00	953	0.01		
	Juveniles	I								0	--
		D	20.0-29.9	0	--	0	--	0	--		
		D	30.0-32.9	0	--	0	--	0	--		
		D	33.0-35.9	0	--	0	--	1	0.00		

(a) P_s = initial proportion surviving: (No. alive + No. stunned)/(No. alive + No. stunned + No. dead).

TABLE 4-16 SURVIVAL OF ICHTHYOPLANKTON AT THE INTAKE (I) AND DISCHARGE (D) OF THE BOWLINE POINT PLANT AS A FUNCTION OF TEMPERATURE EXPOSURE, 1977

Taxon	Station	Yolk-Sac Larvae			Post-Yolk-Sac Larvae			Juveniles		
		Temperature (C)	No. of Fish	P_s(a)	Temperature (C)	No. of Fish	P_s	Temperature (C)	No. of Fish	P_s
Striped bass	I		1	1.00		228	0.74		12	0.92
	D1(b)	20.0-29.9	7	0.71	20.0-29.9	358	0.72	20.0-29.9	6	0.83
	D1	30.0-32.9	1	1.00	30.0-32.9	49	0.78	30.0-32.9	64	0.83
	D1	33.0-35.9	0	--	33.0-35.9	10	0.30	33.0-35.9	10	0.40
White perch	I		0	--		26	0.69		1	1.00
	D1	20.0-29.9	0	--	20.0-29.9	23	0.43	20.0-29.9	0	--
	D1	30.0-32.9	0	--	30.0-32.9	9	0.11	30.0-32.9	4	0.75
	D1	33.0-35.9	0	--	33.0-35.9	6	0.33	33.0-35.9	2	0.00
Clupeids	I		0	--		37	0.54		0	--
	D1	20.0-29.9	0	--	20.0-29.9	18	0.28	20.0-29.9	0	--
	D1	30.0-32.9	0	--	30.0-32.9	4	0.00	30.0-32.9	0	--
	D1	33.0-35.9	0	--	33.0-35.9	0	--	33.0-35.9	2	0.00
Bay anchovy	I		96	0.00		538	0.16		0	--
	D1	20.0-29.9	7	0.00	20.0-29.9	134	0.04	20.0-29.9	0	--
	D1	30.0-32.9	1	0.00	30.0-32.9	394	0.06	30.0-32.9	0	--
	D1	33.0-35.9	24	0.00	33.0-35.9	964	0.01	33.0-35.9	1	0.00
Atlantic tomcod	I		372	0.80		8	0.87		0	--
	D2	5.0-13.9	477	0.67	5.0-13.9	1	1.00	20.0-29.9	2	0.00
	D2	14.0-17.9	22	0.68	14.0-17.9	0	--	30.0-32.9	0	--
								33.0-35.9	0	--

(a) P_s = initial proportion surviving.
(b) D1 = discharge of Unit 1; D2 = discharge of Unit 2.

might be expected on the basis of laboratory determined thermal tolerance for exposures of 10-30 minutes (Ecological Analysts 1978c). It should be noted that the ambient injection system used to reduce collection box temperatures in the larval table in 1977 was 10-15 percent effective. Exposures to potentially stressful temperatures were accordingly still prolonged to the 30 minutes characteristic of the collection process, and the field results may therefore overestimate the thermal effect that would occur during the normal 5-8 minute transit time from the condenser to the diffuser.

Results of the present study and of the 1976 study show that thermal exposures encountered by Atlantic tomcod have minimal impact on survival. Yolk-sac larvae exposed to temperatures ranging from 5.0 to 13.9 C exhibited discharge survivals of 0.67 in 1977 and 0.90 in 1976. Survival at slightly higher discharge temperatures (14.0-17.9 C) was comparable to that at the lower intake temperature range in 1977 (0.68 and 0.67, respectively). Data from recent thermal tolerance studies indicate that the TL50 for larvae of this species is near 25 C at acclimation temperatures of about 2-4 C (Ecological Analysts 1978c). Discharge temperatures above 20 C would not normally be encountered at the Bowline Point plant during the peak tomcod entrainment season and thermal contributions to entrainment mortality of Atlantic tomcod are therefore not anticipated.

4.4 LENGTH ANALYSIS OF STRIPED BASS SURVIVAL

The possible relationship between survival of striped bass and organism size was investigated during the 1977 season at Bowline Point. The length of larvae and juveniles was measured to the nearest 1.0 mm and survival at intake and discharge calculated for each 3.0 mm length interval. Initial survival at the intake was very consistent among all intervals between 3.0 and 17.9 mm, and ranged from 76 to 83 percent (Table 4-17). Control survival for lengths above 18.0 mm was 100 percent based on a total of nine striped bass, most of which were juveniles. Discharge survival for most length intervals ranged between 64 and 100 percent, with no apparent relationship to length. Survival of the seven yolk-sac larvae collected at the discharge (0.71) was nearly identical to that observed for post-yolk-sac larvae in the same length interval (0.68).

Latent survival was high for all length groups, with no significant difference between intake and discharge (Table 4-18). Survival was consistent among all length intervals for the first 24 hours following collection, but survival from 48 to 96 hours was highest for the larger fish (>15 mm) and lowest for fish under 9.0 mm in length. The primary reason for the change in the survival curves with increase in fish size is apparently an increased resistance of larger fish to long-term stress of collection and holding. Figure 4-8 shows, for example, that the "tailing off" of survival after 48 hours, which is apparent for the 6.0-8.9 mm interval, gradually decreases for the larger length groups until survival curves become level through 96 hours of observation.

4.5 ENTRAINMENT SURVIVAL

The effect of the Bowline Point plant on survival of ichthyoplankton was estimated through comparison of intake and discharge results. Intake survival was used as a control because organisms collected in intake samples were not

TABLE 4-17 INITIAL SURVIVAL OF STRIPED BASS COLLECTED AT THE BOWLINE POINT INTAKE (I) AND DISCHARGE OF UNIT 1 (D1) AS A FUNCTION OF LENGTH

Length (mm)	Station	Yolk-Sac Larvae		Post Yolk-Sac Larvae		Juveniles	
		No. of Fish Measured	P_s(a)	No. of Fish Measured	P_s	No. of Fish Measured	P_s
0.0 - 2.9	I	0	--	0	--	0	--
	D1	0	--	0	--	0	--
3.0 - 5.9	I	0	--	5	0.80±0.18	0	--
	D1	1	1.00	4	1.00	0	--
6.0 - 8.9	I	1	1.00	134	0.76±0.04	0	--
	D1	7	0.71±0.17(b)	217	0.68±0.03	0	--
9.0 - 11.9	I	0	--	56	0.79±0.06	0	--
	D1	0	--	97	0.75±0.05	0	--
12.0 - 14.9	I	0	--	19	0.79±0.08	0	--
	D1	0	--	50	0.88±0.05	0	--
15.0 - 17.9	I	0	--	2	1.00	4	0.75±0.21
	D1	0	--	28	0.68±0.09	22	0.91±0.06
18.0 - 20.9	I	0	--	1	1.00	4	1.00
	D1	0	--	3	0.67±0.27	32	0.84±0.07
21.0 - 23.9	I	0	--	0	--	2	1.00
	D1	0	--	1	0.00	14	0.64±0.13
24.0+	I	0	--	0	--	2	1.00
	D1	0	--	0	--	9	0.55±0.17

(a) P_s = initial proportion alive: (No. live + No. stunned)/(No. live + No. stunned + No. dead).
(b) ±1 standard error

TABLE 4-18 LATENT SURVIVAL OF STRIPED BASS COLLECTED AT THE BOWLINE POINT PLANT IN 1977, AS A FUNCTION OF SPECIES LENGTH (ALL LIFE STAGES COMBINED)

Length (mm)	Station	No. of Measured Fish Alive[a]	Time Since Collection (hr) 0	3	6	12	24	48	72	96
3.0 - 5.9	I	4	1.00	1.00	1.00	1.00	1.00	0.75±0.22	0.75±0.22	0.75±0.22
	D	5	1.00	1.00	1.00	1.00	0.80±0.18	0.40±0.22	0.20±0.18	0.20±0.18
6.0 - 8.9	I	103	1.00	0.99±0.01*[b]	0.96±0.02*	0.95±0.02	0.92±0.03	0.89±0.03	0.84±0.04	0.76±0.04
	D	153	1.00	0.94±0.02	0.90±0.02	0.88±0.03	0.87±0.03	0.87±0.03	0.81±0.03	0.71±0.04
9.0 - 11.9	I	44	1.00	1.00	1.00	1.00	1.00	1.00	0.95±0.03	0.84±0.06
	D	73	1.00	0.99±0.01	0.99±0.01	0.97±0.02	0.97±0.02	0.97±0.02	0.92±0.03	0.88±0.04
12.0 - 14.9	I	15	1.00	0.94±0.06	0.94±0.06	0.94±0.06	0.94±0.06	0.94±0.06	0.86±0.09	0.86±0.09
	D	44	1.00	0.95±0.03	0.95±0.03	0.95±0.03	0.95±0.03	0.95±0.03	0.91±0.04	0.89±0.05
15.0 - 17.9	I	5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81±0.18
	D	40	1.00	0.94±0.04	0.94±0.04	0.94±0.04	0.91±0.05	0.91±0.05	0.91±0.05	0.84±0.08
18.0 - 20.9	I	5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	35	1.00	0.96±0.03	0.96±0.03	0.93±0.05	0.93±0.05	0.93±0.05	0.93±0.05	0.93±0.05
20.0 - 23.9	I	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
24.0+	I	2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	D	5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

(a) Number live + No. stunned.
(b) ±1 standard error

Note: * indicates survival at the discharge significantly lower than that at the intake for a one-tailed test of the difference in two proportions at the $\alpha = 0.05$ level (z-test).

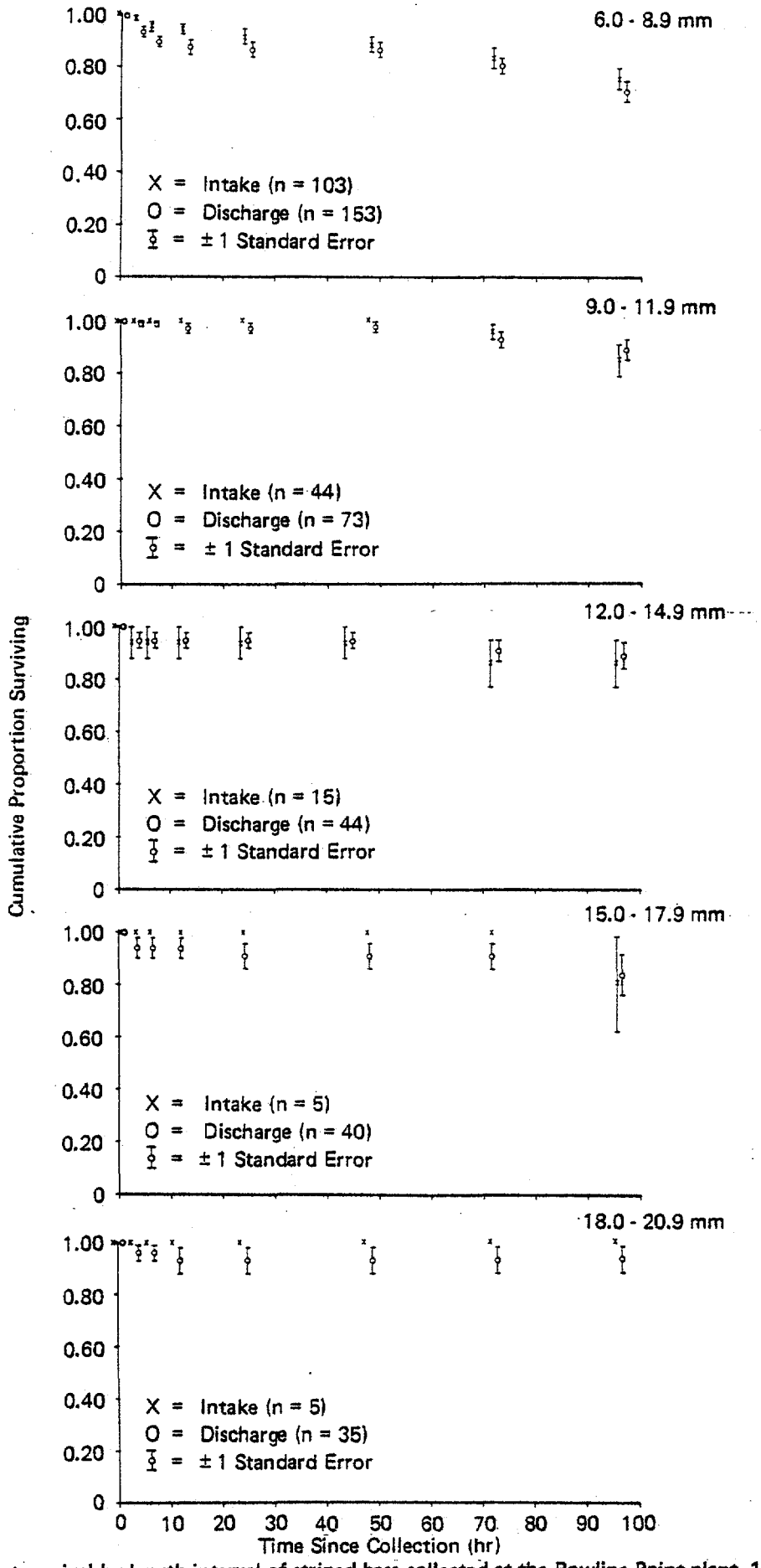


Figure 4-8. Latent survival by length interval of striped bass collected at the Bowline Point plant, 1977.

subjected to the plant, although they did experience handling and sampling stresses as in the discharge collections. Differences between intake and discharge survival were tested for significance (one-tailed z-test, $\alpha = 0.05$), and entrainment survival was calculated with the equation:

$$S_e(\%) = P_D/P_I \times 100$$

where

P_I = proportion surviving at the intake
P_D = proportion surviving at the discharge.

In order to assure a representative sample, entrainment survival was estimated for each species and life stage for those cases where at least five organisms were collected at both the intake and discharge stations. Initial survival data were used for striped bass, white perch, clupeids, and Atlantic tomcod. Estimates of entrainment survival were not made for bay anchovy yolk-sac larvae.

Entrainment survival for Morone and clupeids is generally high when total temperature of the discharge water is less than 30-33 C (Table 4-19). Survival of striped bass larvae at temperatures below 30 C was 97 percent in 1977, and 91 and 77 percent in 1975 and 1976, respectively. The 1977 data indicate that about 100 percent of this species life stage survived through-plant passage at discharge temperatures between 30.0-32.9 C, compared to 1976 estimates of 67 percent (the sample size was too low to estimate survival at high discharge temperatures in 1975). No significant difference was found between intake and discharge survival at discharge temperatures below 30 C for striped bass, white perch, or clupeid post-yolk-sac larvae. Entrainment survival in this temperature range was 51-97 percent compared with 41-48 percent at discharge temperatures above 33 C. Survival of Atlantic tomcod was 84 percent at discharge temperatures of 5.5-13.9 C. Survival of this species life stage in 1976 was estimated to be 100 percent. No significant difference was found between intake and discharge survival for this species at the higher temperature range (14.0-17.9 C). The comparability between the percent survival at the lower (84 percent) and the higher temperature (85 percent) intervals indicates that the higher discharge temperatures did not have an appreciable effect on tomcod yolk-sac larvae. Striped bass juveniles survived entrainment well at discharge temperatures below 33 C. Ninety percent survived temperatures between 30.0 and 32.9 C, with no significant difference existing between survival at the intake and discharge. Juvenile survival was lower at temperatures above 33 C (43 percent); survival was somewhat better in this range in 1976 (70 percent).

Entrainment survival of all life stages of striped bass, white perch, Atlantic tomcod, and clupeids at exposure temperatures below the thermal tolerance limits of the species has been consistently high in studies conducted at Bowline Point between 1975 and 1977 (Table 4-20). Moreover, it appears both from the field studies and laboratory thermal effects studies that the thermal tolerance of these species is not likely to be exceeded under normal plant operation with the possible exception of the short period of entrainment occurring during July.

TABLE 4-19 ENTRAINMENT SURVIVAL OF ICHTHYOPLANKTON AT THE BOWLINE POINT PLANT, 1977

Taxon	Yolk-Sac Larvae		Post-Yolk-Sac Larvae		Juveniles	
	Temperature (C)	S_e (%)(a)	Temperature (C)	S_e (%)	Temperature (C)	S_e (%)
Striped bass	20.0-29.9	--	20.0-29.9	97 (NS)	20.0-29.9	90 (NS)
	30.0-32.9	--	30.0-32.9	100 (NS)	30.0-32.9	90 (NS)
	33.0-35.9	--	33.0-35.9	41	33.0-35.9	43
White perch	20.0-29.9	--	20.0-29.9	62	20.0-29.9	--
	30.0-32.9	--	30.0-32.9	16	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	48	33.0-35.9	--
Clupeids	20.0-29.9	--	20.0-29.9	51 (NS)	20.0-29.9	--
	30.0-32.9	--	30.0-32.9	--	30.0-32.9	--
	33.0-35.9	--	33.0-35.9	--	33.0-35.9	--
Bay anchovy	20.0-29.9	NE	20.0-29.9	NE	20.0-29.9	--
	30.0-32.9	NE	30.0-32.9	NE	30.0-32.9	--
	33.0-35.9	NE	33.0-35.9	NE	33.0-35.9	--
Atlantic tomcod	5.5-13.9	84	5.5-13.9	--	5.5-13.9	--
	14.0-17.9	85 (NS)	14.0-17.9	--	14.0-17.9	--

(a) S_e (%) = Entrainment survival (percent).

Note: Dashes indicate less than five organisms collected at the intake or discharge.
(NE) indicates that no estimate of entrainment survival was made for reasons described in the text.
(NS) indicates survival at the discharge not significantly lower than that at the intake for a one-tailed z-test at the $\alpha = 0.05$ level:

TABLE 4-20 ENTRAINMENT SURVIVAL FROM NONTHERMAL[a] EFFECTS AT THE BOWLINE POINT PLANT, 1975-1977

		1975			1976			1977			1975-1977		
Species	Life Stage	N_I	N_D	Se (%)	N_I	N_D	Se (%)	N_I	N_D	Se (%)	N_I	N_D	Se (%)
Striped bass	Yolk-sac	--	--	--	10	1	--	1	7	--	11	8	68
	Post-yolk-sac	141	105	91	118	146	77	228	358	97	457	609	90
	Juvenile	--	--	--	13	32	89	12	70	90	25	105	90
White perch	Yolk-sac	--	--	--	--	--	--	--	--	--	--	--	--
	Post-yolk-sac	122	154	100	54	23	83	26	23	62	202	200	100
	Juvenile	--	--	--	7	6	83	1	4	--	8	10	80
Clupeids	Yolk-sac	--	--	--	--	--	--	--	--	--	--	--	--
	Post-yolk-sac	24	16	100	46	58	80	37	18	51	107	92	77
	Juvenile	--	--	--	--	--	--	--	--	--	--	--	--
Atlantic tomcod	Yolk-sac	--	--	--	280	143	100	372	499	84	652	642	90
	Post-yolk-sac	--	--	--	54	17	54	--	--	--	62	18	57
	Juvenile	--	--	--	--	--	--	--	--	--	--	--	--

(a) Observed survival is presented for organisms captured at discharge temperatures less than 20.0 C for Atlantic tomcod, 33.0 C for Morone juveniles, and 30.0 C for all other species/life stages.

Note: N_I = number collected at intake.
N_D = number collected at discharge.
$S_e(\%)$ = entrainment survival (percent).

4.6 DIRECT RELEASE SURVIVAL STUDIES

Through-plant survival estimates for the direct releases varied from 0 to 100 percent (Table 4-21). However, examination of the data indicates that entrainment survival estimates are high (70-100 percent) on all dates for which intake control and holding control (Table 4-22) survival was similar to that observed during field sampling of river larvae (see Section 4.3). The single exception was for the 24 June release for which the entrainment survival estimate was 35 percent, which was collected at a higher discharge temperature (32 C). However, when the number of dead collected at the discharge is adjusted for the proportion dead in the release (0.69) (Table 4-23) the entrainment survival estimate increased to 100 percent with no significant difference between intake controls and discharge survival. The low 96-hour survival for this release may reflect latent effect of stress incurred during transport of the larger organisms as reflected by the high population mortality prior to release (Table 4-23). Background samples (Table 4-24) were used to adjust the total number of larvae recovered for in situ larvae abundance but not to adjust survival estimates. No significant differences in survival estimates were found between pump modes for the 6 June to 10 June releases. The entrainment survival of striped bass larvae estimated by these experiments is consistent with that determined for post-yolk-sac larvae sampled from the river during the same period.

TABLE 4-21 MEAN INITIAL AND 96-HOUR PROPORTIONS SURVIVING OF STRIPED BASS LARVAE RELEASED AT THE INTAKE AND COLLECTED AT THE DISCHARGE OF THE BOWLINE POINT PLANT WITH ASSOCIATED ESTIMATES OF THROUGH-PLANT PERCENT SURVIVAL, 1977

Date	Life Stage/ Age	Station[a]	Pump Operation	Temperature (C)	No. of Fish	Proportion Alive[b] Initial	Proportion Alive[b] 96-hr	S(%)[c]	Proportion Released Dead	Adjusted[d] Proportion Alive Initial	Adjusted[d] Proportion Alive 96-hr	Adjusted[d] Se (%)
24 MAY	Yolk sac larvae/ 2 day	IC	2 throttled	24.7	99	0.32±0.09	0.03±0.03		--	--	--	
		DE			32	0.00	--	0				
6 JUN	Post-yolk-sac larvae/ 21 day	IC	2 throttled	28.5	86	0.80±0.09	0.23±0.09		--	--	--	
		DE			55	0.76±0.11	0.49±0.13	95 (NS)				
7 JUN	Post-yolk-sac larvae/ 14 day	IC	2 full	28.0	94	0.91±0.06	0.62±0.10		--	--	--	
		DE			159	0.84±0.06	0.69±0.07	92 (NS)				
8 JUN	Post-yolk-sac larvae/ 15 day	IC	2 full	27.0	104	0.86±0.07	0.66±0.09		0.16	1.00	0.94±0.03	100 (NS)
		DE			87	0.88±0.07	0.76±0.09	100 (NS)				
9 JUN	Post-yolk-sac larvae/ 16 day	IC	3 full	25.5	--	--	--		0.31	0.92±0.05	0.62±0.09	--
		DE			37	0.67±0.15	0.44±0.16	--				
10 JUN	Post-yolk-sac larvae/ 18 day	IC	3 full	26.5	96	0.92±0.05	0.44±0.10		0.18	0.82±0.12	0.36±0.02	89 (NS)
		DE			14	0.64±0.25	0.29±0.24	70				
24 JUN	Post-yolk-sac larvae/ 26 day	IC	2 full	31.9	102	0.81±0.08	0.13±0.07		0.69	0.87±0.09	0.00	100 (NS)
		DE			47	0.28±0.13	0.00	35				

(a) IC indicates intake control fish; DE indicates discharge experimental fish.
(b) Proportion alive = (No. live + No. stunned)/(No. live + No. stunned + No. dead).
(c) S(%) = percent through plant survival ($S(\%) = \frac{P_D}{P_I} \times 100$)

(d) Number dead adjusted for estimated proportion dead released at intake.

Note: Dashes indicate no data available; (NS) discharge survival not significantly lower than intake survival (one-tailed z-test, $\alpha = 0.05$).

TABLE 4-22 SUMMARY OF SURVIVAL DATA FOR HOLDING CONTROLS DURING DIRECT RELEASE STUDIES AT THE BOWLINE POINT PLANT, 1977

Date	No. of Organisms	Proportion Alive		
		24 hr	48 hr	96 hr
7 JUN	48	1.00	0.96±0.03	0.40±0.07
8 JUN	46	1.00	0.98±0.02	0.76±0.06
9 JUN	47	0.98±0.02	0.96±0.03	0.49±0.07
10 JUN	50	1.00	0.98±0.02	0.16±0.05
24 JUN	48	0.50±0.07	0.15±0.05	0.00

TABLE 4-23 EXPECTED AND ACTUAL NUMBER OF STRIPED BASS LARVAE RECOVERED AT THE BOWLINE POINT PLANT DISCHARGE FOLLOWING RELEASE AT THE INTAKE OF AN ESTIMATED POPULATION SIZE

Release Date	Life Stage/Age	Volume Sampled (m^3)	Volume Through Plant In 15/min (m^3)	Estimated No. Released (Live & Dead)	Appprox. No. Dead in Release	Actual No. Recovered[a]	Corrected for Background[b] Larvae
24 MAY	Yolk-sac larvae/2 day	16.9	14,580	89,677±12,849[c]	--	33	32
6 JUN	Post-yolk-sac larvae/21 day	18.1	14,580	16,762±6,322	--	57	53
7 JUN	Post-yolk-sac larvae/14 day	18.5	18,000	94,558±11,467	--	161	150
8 JUN	Post-yolk-sac larvae/15 day	14.8	18,000	162,089±25,222	26,550	88	85
9 JUN	Post-yolk-sac larvae/16 day	16.1	21,780	158,546±29,370	48,369	37	35
10 JUN	Post-yolk-sac larvae/18 day	17.1	21,780	6,116±1,117	1,126	15	5
24 JUN	Post-yolk-sac larvae/26 day	15.3	18,000	69,714±8,404	48,149	51	50

(a) Includes those fish collected in table wash codend but not used in survival calculations.
(b) Mean of pre- and post-discharge samples subtracted from actual number recovered.
(c) Indicates 95 percent confidence interval.

Note: Dashes indicate no data available.

TABLE 4-24 BACKGROUND NUMBERS OF RIVER LARVAE COLLECTED DURING DIRECT RELEASE STUDIES

Release Date	Number of Fish in Pre-release		Number of Fish in Post-release	
	Discharge	Intake	Discharge	Intake
24 MAY	--	0	1	0
6 JUN	3	0	5	3
7 JUN	11	1	10	0
8 JUN	1	--	5	--
9 JUN	2	--	--	--
10 JUN	9	--	10	--
24 JUN	3	--	0	--

Note: Dashes indicate no data available.

REFERENCES

Bath, D. 1974. New York University egg and larval seminar. Unpublished.

Bayless, J. D. 1972. Artificial propagation and hybridization of striped bass, Morone saxatilis (Walbaum). South Carolina Wildlife Resources Dept.

Bigelow, H. B. and W. C. Schroeder. 1953. Fishes of the Gulf of Maine. U.S. Fish and Wildlife Serv. Fish Bull. 74.

Booth, R. A. 1967. A description of the larval stages of the tomcod, Microgadus tomcod, with comments on its spawning ecology. Ph.D. Thesis, Univ. Connecticut.

Chambers, J. R., J. A. Musick and J. Davis. 1976. Methods of distinguishing larval alewife from larval blueback herring. Chesapeake Sci. 17:93-100.

Cianci, J. M. 1969. Larval development of the alewife, Alosa pseudoharengus Wilson and the glut herring Alosa aestivalis Mitchell, M.S. Thesis, Univ. Conn.

Doroshev, S. I. 1970. Biological features of the eggs, larvae, and young of the striped bass (Roccus saxatilus Walbaum) in connection with the problem of its acclimatization in the USSR. J. Ichthiology 10:236-247.

Dovel, W. L. and J. R. Edmunds. 1971. Recent changes in striped bass spawning sites and commercial fishing areas in Upper Chesapeake Bay; Possible influencing factors. Chesapeake Sci. 12:33-39.

Ecological Analysts. 1976. Bowline Point Generating Station Entrainment Survival and Abundance Studies. 1975 Annual Interpretative Report.

Ecological Analysts. 1977a. Bowline Point Generating Station Entrainment and Impingement Studies. 1976 Annual Report.

Ecological Analysts. 1977b. Roseton Generating Station Entrainment and Impingement Survival Studies. 1975 Annual Interpretive Report.

Ecological Analysts. 1977c. Lovett Generating Station Entrainment and Impingement Studies. 1976 Annual Report.

Ecological Analysts. 1978a. Lovett Generating Station Ichthyoplankton Entrainment Survival. 1977 Annual Interpretive Report.

Ecological Analysts. 1978b. Indian Point Generating Station Entrainment Survival and Related Studies. Annual Report 1977.

Ecological Analysts. 1978c. Hudson River Thermal Effects Studies for Representative Important Species. Final Report. Prepared for Central Hudson Gas & Electric Corporation; Consolidated Edison Company of New York, Inc., and Orange and Rockland Utilities, Inc.

Hildebrand, S. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. Bull. U.S. Bur. Fish. 43.

Krester, W. A. 1968. Aspects of striped bass larvae Morone saxatilis captured in the Hudson River near Cornwall, N.Y. April-August 1968. Consolidated Edison Company of New York, Inc.

Lauer, G. J., W. T. Waller, D. W. Bath, W. Meeks, R. Heffner, T. Ginn, L. Zubarick, P. Bibko and P. C. Storm. 1974. Entrainment studies on Hudson River organisms. Proc. Sec. Entrain. Intake Screen. Workshop (L. D. Jensen, ed.). The Johns Hopkins Univ. Cool. Wat. Res. Proj. Rep. No. 15. 374 p.

Leim, A. H. 1924. The life history of the shad (Alosa sapidissima) with special reference to the factors limiting its abundance. Contrib. Canadian Biol. 2(11):161-284.

Lippson, A. J. and R. L. Moran. 1974. Manual for identification of early developmental stages of fishes of the Potomac River Estuary. Env. Tech. Center, Martin Marietta Corp.

Mansuetti, A. J. and J. D. Hardy, Jr. 1967. Develpment of fishes of the Chesapeake Bay region; an atlas of egg, larval, and juvenile stages. Natural Res. Inst., Univ. of Maryland. 202 pp.

Rathjen, W. F. and L. C. Miller. 1957. Aspects of the early life history of the striped bass (Roccus saxatilis) in the Hudson River. N.Y. Fish and Game J. 4:43-60.

Scotton, L. N., R. E. Smith, N. S. Smith, K. S. Price, and D. P. de Sylva. 1973. Pictorial guide to fish larvae of Delaware Bay with information and bibliographies useful for the study of fish larvae. College Marine Studies, Univ. Delaware, Delaware Bay Rpt. Ser. 7. 206 pp.

Wang, J. C. S., and R. J. Karnehan. In press. Fishes of the Delaware Estuaries: A Guide to the Early Life histories. EA Communications.